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No. 2194

FEBRUARY 11, 1922.

VOL. XCVI.



## THE BEST HOUSE FOR ALL PHARMACEUTICAL PRODUCTS

Proprietors of the "Silver Churn" Dairy Preparations.

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*Rich in Fat Soluble A. Vitamin*



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**47½%**  
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**1/3 size—10/6 per doz. 2/0 size—17/6 per doz.**  
(P.A.T.A.)

**5% DISCOUNT.**

**BONUS TERMS.**—13 to the doz. on orders of 3 doz. and upwards.  
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2/6 " "	10 "	24/- " "	23/5 " "	22/10 " "
4/6 " "	20 "	43/2½ " "	42/1½ " "	41/0½ " "

*The special terms offered for orders to the value of not less than £6 net apply only when the goods are ordered in complete dozens, with a minimum of 2 dozen for the small size. Goods to the net value of not less than £4 net are carriage paid to the nearest Railway Station.*

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*Orders should be sent to the Chemist's usual Wholesaler.*

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(Patent applied for)

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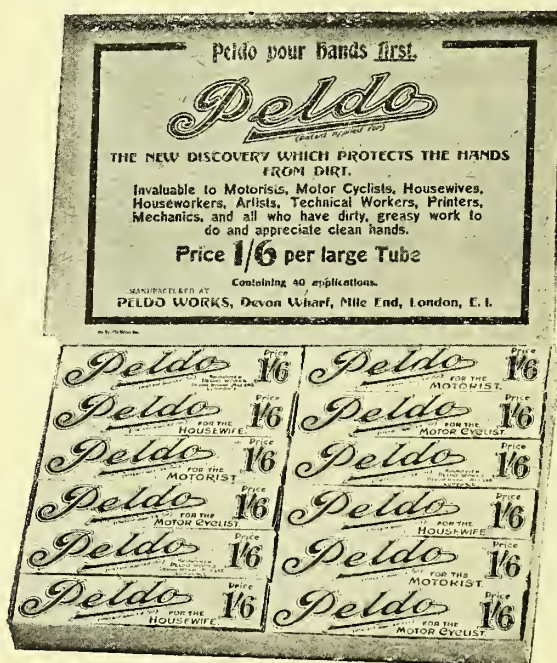
¶ "PELDO" is stocked by all the leading Patent Houses, or can be obtained direct.

RETAIL PRICE

**1/6**

EACH NET  
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Attractive Window Display material and Showcards supplied. Sample Tubes supplied gratis in proportion to quantity ordered.



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PRICE

**13/6**

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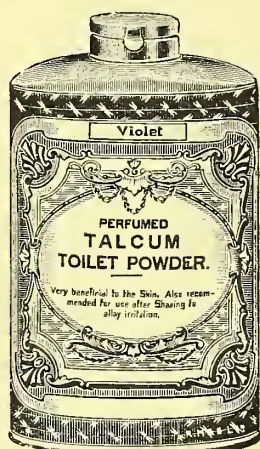
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hinged lids.

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Lather.  
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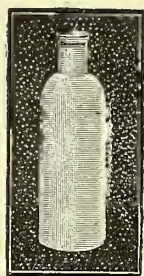
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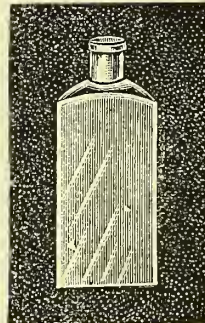


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Laboratory  
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in immense  
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The fashionable, wanted  
shades. No "left overs"  
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Sold by Chemists and  
Stores.

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#### 3 Dozen Assortment

Bottles	Bottles
6 Dull Black	2 Grey Dull
2 Gloss Black	1 Sage Green Dull
4 Navy Blue Dull	2 Old Rose Dull
2 Navy Blue Gloss	2 Cardinal Red Dull
2 Cadet Blue Dull	2 Cerise Dull
2 Victory Blue Dull	1 Lavender Dull
1 Burnt Straw Dull	2 Violet Dull
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Established in 1875.

Member of the British Chamber of Commerce at Barcelona.

AGENCIES WANTED FOR GOOD-CLASS CHEMICAL AND  
PHARMACEUTICAL SPECIALITIES.

Don't miss the  
Special  
**Colorite**

Introductory Offer  
overleaf—

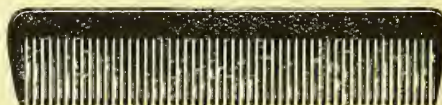
*There's Money in it.*

# BIDWELLS

Factories: AXMINSTER, DEVON.

London—6 East India Avenue, E.C. 3.

## WE OFFER



Half-dozen each of 9 patterns, £2 9 6.  
Sell readily for £4 19 0.



# "N.C.F." Brand

COCAINE & SALTS

ÆTHOCAINE

(Chemically and physiologically identical  
with Novocain).

HOMATROPINE

& SALTS

*Manufactured by*

THE NEDERLANDSCHE  
COCAINEFABRIEK,  
AMSTERDAM.

# "RHODIA" Brand

ANTI-PYRETICS

GUAIACOL PRODUCTS

PHOTOGRAPHIC  
CHEMICALS

SALICYLATES

VANILLIN

and other fine chemicals.

*Manufactured by*

LA SOCIÉTÉ CHIMIQUE  
DES USINES DU RHÔNE,  
PARIS.

# QUININE and SALTS

QUININE DICARBONATE

QUININE ETHYLCARBONATE

CINCHONIDINE

CINCHONINE

QUINIDINE

QUINOIDINE

AND SALTS

*Manufactured by the*

BANDOENGSCHE KININEFABRIEK  
AMSTERDAMSCH E CHININEFABRIEK  
NEDERLANDSCHE KININEFABRIEK

*Apply to*

SOLE AGENTS FOR THE UNITED KINGDOM

Tel. No.  
City 6550  
(8 lines)

**R. W. Greeff & Co. Ltd.**  
THAMES HOUSE, QUEEN STREET PLACE, LONDON, E.C.4.

Tel. Add.  
"Greeff, Cannon,  
London."

*Branch Office*

PALATINE BANK BUILDINGS, 10, NORFOLK ST MANCHESTER.

Tel. No City 5706/7. Tel. Add. Greeff, Manchester.



# Start your Waterglass Sales early this year.

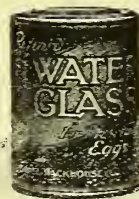
The season's keenest prices now quoted for **GOODALL'S** well-known packs.

*Note the specially competitive NEW line.*

**T**HE way to make sure of a good Waterglass season is to get the goods into stock and on show *in good time*. The prices for the famous **GOODALL'S WATER-GLASS** are the lowest possible for a product of the high-grade needed to build up permanent year-after-year

trade. Please send a postcard for them.

This year **GOODALL'S WATER-GLASS** is offered in two different (no name) styles of packing: (1) in lever-lid **TINS**, with the well-known and very decorative 4-colour varnished label; and (2) in cardboard containers, with varnished labels of new design. In both cases the actual contents are of the same high quality—a quality which makes successful egg preserving easy, and protects you from all likelihood of complaints.



**Showcards for window and counter display FREE with every order.**

*Special quotations for contracts and large quantities. Please let us know your requirements.*

**GOODALL, BACKHOUSE & CO.**

**LEEDS**

## HIGHEST GRADE AUSTRALIAN SANDALWOOD OIL

GUARANTEED NOT UNDER

**90%**

OPTICAL ACTIVITY

—6° to —10°

*Recent Analysis:*

Alcohols (as Santalol)	91.3 %
Ester Santalol	... 3.2 %

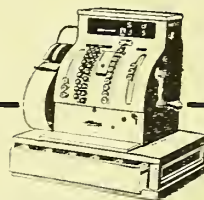
Accepted by Australian Medical authorities as equal to B.P. Oil for medicinal purposes.

*Distilled by*

**PLAIMAR LTD., PERTH,**  
West Australia.

*Agents for United Kingdom and Europe:*

**PLAISTOWE & CO., LTD.**  
King's Cross, London, N.1



## Opportunities for Retailers

We often take back used Cash Registers when customers are installing larger or more up-to-date machines. These National Cash Registers,

### Thoroughly Overhauled and Rebuilt

are sold under the Company's full guarantee at reduced prices.

Write for details of "Nationals" available, Dept. R.9, The National Cash Register Co., Ltd., 225 Tottenham Court Rd., London, W.1

Maw's



Page

Feb. 11, 1922

No. 539

## Serving a Third Generation

How we have built a reputation that endures

The following letter speaks for itself. It is an indication of how the reputation of the House of Maw has been built. Unfortunately we are only able to reprint an extract; the whole of the letter breathes the same spirit of satisfaction.

Messrs. S. Maw, Son & Sons, Ltd.  
London, E.C. 1.

Uitenhage,  
South Africa.

Dear Sirs,—I thank you for the goods sent by parcel post, which reached here in good condition, and are quite what I wanted, and already are selling like hot cakes.

Your M.S.S. are quite a boon. Most interesting to read, and give one an idea what to order from you. . . .

You will be interested to know that you are serving a third generation of chemists, as my late father and great uncle were chemists and customers of the House of Maw.

I have at present in my home a set of serviette rings which were purchased from Messrs. Maw's fifty years ago as a wedding present of my late Dad. . . .

I spent some hours with your Mr. Wharton, and he advised me what lines to get and not to overstock: this was the history of my first order to Maw's.

I look back on this day as a red-letter one for my business because the goods were right, and I sold each and every article before Mr. Wharton's return. The quality of the goods was excellent. I mentioned to the doctors that I stocked Maw's Sundries, and they advised their patients when purchasing sundries to see they got Maw's. . . .

Long live the House of Maw is the sincere wish of

Yours faithfully,

Telephone:  
City 7  
Private  
Branch  
Exchange

Telegrams:  
Eleven  
Cent  
London

**S. Maw, Son & Sons, Ltd.**  
Aldersgate St., London.  
and Barnet.

Cables:  
Eleven  
London

Code  
A.B.C.  
4th & 5th  
Edition







## The Sensation of the CHEMISTS' TRADE for 1922.

**H**ERE is a new, original and exclusive line, bringing fresh business and liberal profits—the Polar Cub Vibrator. Vibratory massage is recognised by the Medical profession as one of the most powerful aids to Health. It dislodges secretions of uric acid, drives poisons out of the system, and gives strength to the muscles and internal organs. It improves the skin, tones up the circulation and complexion.

You can sell and recommend the Polar Cub either for Health or for Beauty Culture. The Retailer's selling price is 37/6, affording you a handsome profit on every one you sell.

Every Polar Cub is fully guaranteed by the A. C. Gilbert Company as far as workmanship and material are concerned. Your responsibility ends with the sale.

Polar Cubs will be a nationally advertised product; get stocks in early to meet the big demand.

Write for full particulars and trade terms to-day.

# Polar Cub Electric Vibrator

*A supply of attractive advertising matter to help you sell Polar Cub Vibrators is sent on receipt of every order.*

The A. C. GILBERT COMPANY, 125 High Holborn, London, W.C. 1



# A "George Holliday" Announcement

We have pleasure in announcing an important

## REDUCTION IN PRICE

of all unwrapped Toilet Soaps, and shall be glad to quote Pharmacists revised prices for special "own name" soaps, or our own regular lines, including the New Style Series 110-117, the

## Best and Best-Looking 4<sup>D</sup>. Toilet

(PURE—SUPERFATTED—HIGHLY PERFUMED)

ON THE MARKET TO-DAY, AND WHICH IS

**RESERVED AND SOLD ONLY TO CHEMISTS**

NEW STYLE. SERIES 110-117 (Facsimile Size).



SHOWCARDS SUPPLIED.

### PRICE GUARANTEE.

*We undertake to give purchasers the benefit of any reduction in this price occurring within 21 days from date of invoice.*

### Assortment :

Buttermilk  
Cold Cream and  
Glycerine  
Glycerine and  
Cucumber  
Otto of Rose  
Old Brown  
Windsor  
Oatmeal  
Parma Violet  
Heliotrope

SINGLE GROSS

# 34/9

2 GROSS 2½%  
CARRIAGE PAID

**George Holliday & Co., Ltd.** MAKERS OF MIDGLEY'S SOAPS  
MANCHESTER, Estab 1833

Wholesale Distributors—EVANS SONS LESCHER & WEBB, Ltd., Liverpool and London.

**"Let the Medicinal  
Vapours of**



***Cure Your Cold."***

THAT'S WHAT  
CHEMISTS  
ARE STILL TELLING THEIR CUSTOMERS  
— TO THEIR MUTUAL BENEFIT

*THE KINHALOR, as the name suggests, is a Handy and Efficient Pocket Inhaler. Splendidly got up in a nickel-plated tube and handsomely cartoned*

**SELLS ON SIGHT**

COSTS  
**10d.**

AND LEAVES A GOOD  
MARGIN OF PROFIT

RETAILS AT  
**1/3**

MADE BY

**Hough, Hoseason & Co.**

LIMITED

Manufacturing Chemists - - MANCHESTER

ASK FOR OUR NEW PRICE LIST



# AYRTON'S WEEKLY

PAGE  
15

## Why not bring the demand to your Pharmacy?

A massed display of a seasonable speciality creates sales.

### WATERGLASS

the reliable Egg Preservative, is now in big demand by the thrifty housewife.

The special features of our pack are:

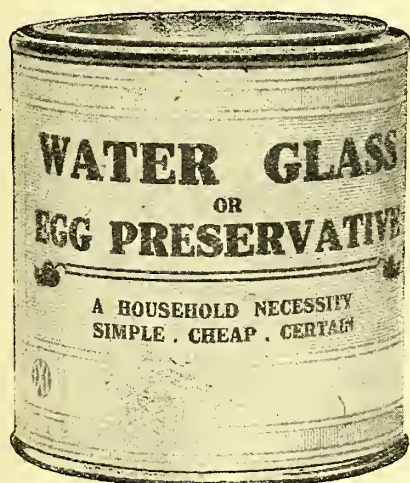
Highest concentration Waterglass, 140° Tw.

All tin lever-lid containers.

Attractive labels.

Specially low prices.

Prompt delivery.



Sizes	1	2	4	7 lb.
Per dozen	5/-	7/9	13/6	20/-
Gross lots	4/9	7/6	13/-	19/6

Showcards and window strips supplied with all orders.

£5 orders, assorted sizes, are carriage paid, and subject to a discount of 5% and 2½%.

Special prices for larger quantities on application.

Chemist's name and address on orders of six dozen and upwards. Specimen labels sent free on request. Special packings for Export. Prices on application.

## AYRTON, SAUNDERS & Co. LTD

Manufacturing Chemists

Hanover Street, LIVERPOOL

Telegrams : "SUNDRIES LIVERPOOL."



## Note these points on TRIDENT VIALS

ESPECIALLY THE TWO DIFFERENTLY SHAPED NECKS.

THE Trident Vial illustrated below on the left has a long neck, and a specially formed flanged lip, so devised as to overcome the difficulty of pouring, which has hitherto been the great defect with short neck vials.

The illustration below on the right shows the standard wide mouth pattern vial which is still the best for packing powders, pills and tablets.

In strength, correctness of capacity, and evenness of glass they are indisputably the very finest in the market. They are made in all standard sizes and can be supplied to order in any special size from 10 m/m in diameter by 1 inch long to 24 m/m in diameter and 6 inches long.

Every gross of Trident Vials is packed in a separate box. Checking and sorting can thus be done with great facility. Breakage is practically eliminated. Cleanliness is ensured.

# TRIDENT Vials

Sole Manufacturers—

JOHNSON & JORGENSEN FLINT GLASS LIMITED  
26 & 27 FARRINGTON STREET, LONDON, E.C.4.

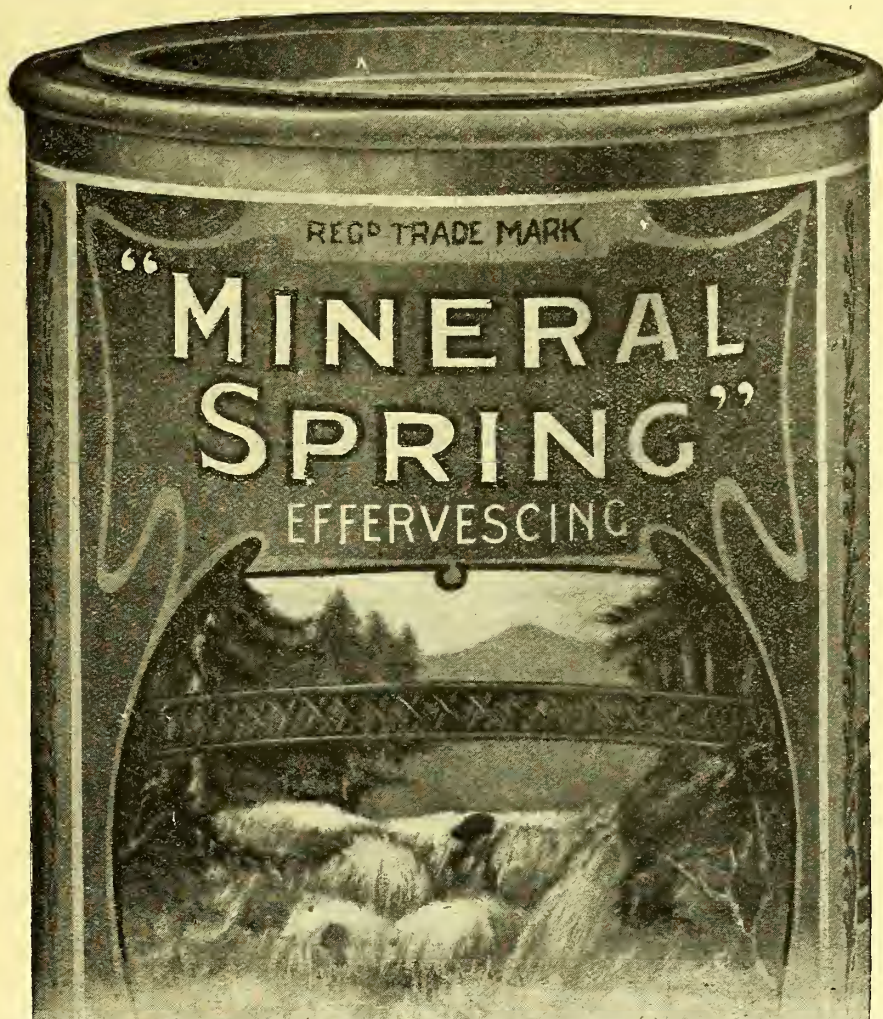
WHOLESALE ONLY.

Telephone:  
City 8882 (4 lines).

Telegrams:  
"Fish, Cent., London."







## THE SALT THAT STANDS ALONE

"Mineral Spring" Health Granules are unique in many ways—in the size and brilliant colouring of the tins; in the crisp and sparkling effervescence, the medicinal activity and admirable keeping qualities of the contents; and in the trading conditions which allow a generous protected margin of profit and restrict the sale to Chemists and Druggists only.

"Mineral Spring" Health Granules are packed in two sizes, retailing at 1/- and 2/- respectively.

THOMAS KERFOOT & CO LTD  
BARDSLEY VALE, LANCASHIRE,  
& Bardsley House, London, N.1  
ESTABLISHED 1797.

COPYRIGHT



# *Poudre Nildé*

in the sifter box

*A bigger turnover—and a bigger profit.*

**Y**OU can confidently recommend Poudre Nildé. You know when you *do* recommend it that the customer will return—to ask for more.

And the customer passes on the recommendation to her friends. That means more business for you—a bigger

turnover—with a profit of  $33\frac{1}{3}\%$  on every sale of Poudre Nildé.

It pays to “push” Poudre Nildé—pays to display it in your window and on your counter. Poudre Nildé is advertised persistently—forcefully. Let the public know you stock it. Watch your sales—and profits—increase.

*Made in six shades—Rachel, Naturelle, Blanche, Rose, Basanée, and Indienne.*

Handbag size, 1/-; medium, 2/-; large, 3/6.

Leather or fancy embroidered Vanity Cases with mirror in lid.  
Small size, 5/-; medium, 7/6; large, 10/-.

*All Nildé preparations show  
 $33\frac{1}{3}\%$  profit on selling price.*

**NILDÉ,**  
**Paris.**

*British & Colonial Agents:*

**8 BLENHEIM ST.,  
LONDON, W.1.**



**EACH BOX  
CONTAINS  
A PUFF.**



# Rouge Invisible Nildé

## in the sifter box

**R**OUGE INVISIBLE NILDÉ is an ideal line to handle. Like all Nildé preparations, it sells quickly and carries a profit of  $33\frac{1}{3}\%$  on the selling price.

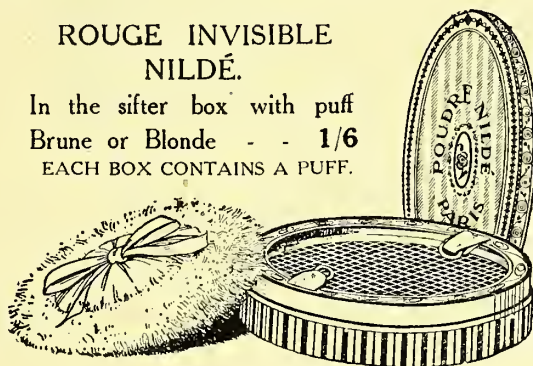
The reason for the continuous sales of Nildé preparations is to be

found first and foremost in quality. But almost as important is the dainty and attractive way they are "put up."

A prominent display of Nildé goods will repay you many times over. Nildé preparations turn over quickly—and speed up sales all round. *They increase your profits.*

### ROUGE INVISIBLE NILDÉ.

In the sifter box with puff  
Brune or Blonde - - 1/6  
EACH BOX CONTAINS A PUFF.



## OTHER NILDÉ PREPARATIONS

### CRÈME DE BEAUTÉ NILDÉ

Blanche or  
Naturelle, 2/-  
Large size, 3/-



### SAVON NILDÉ

The creamy lather  
Soap - - Price 1/-

Cartons containing  
3 tablets - - - 3/-



### NILDÉ LIP SALVES

In elegant metal  
containers.

White - 9d.

Rouge or  
Carmine 1/-



# NILDÉ, Paris.

British and Colonial Agents:

8 BLenheim ST., LONDON, W.1.



# DE LUZY

## *Parfumeur*

### PARIS



FAIR TERMS AND FAIR  
TREATMENT ARE  
MAKING US NEW  
FRIENDS & BETTER  
FRIENDS EVERY DAY

VISIT OUR  
SHOWROOM  
WHEN  
IN TOWN

AND INVESTIGATE  
OUR CLAIMS WITHOUT  
ANY OBLIGATION TO  
BUY.

DE LUZY

(London Office)

3 London Wall Avenue, E.C. 2

W. H. CALNAN, General Manager

Telephone: Wall 9966

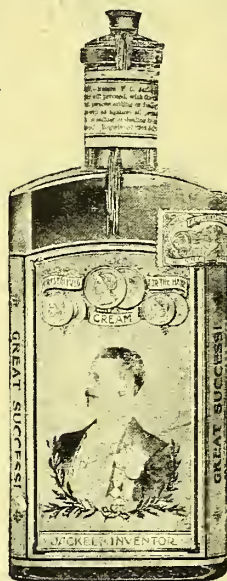
# "Jackel's Cream"

(without Grease)

for THE HAIR

Sold everywhere

Established 1883.



CRYSTALLISED  
1/9 CREAM 2/6

Trade Mark attached to each  
bottle.

"Jackel's Cream"  
fixes the hair in any de-  
sired position; is un-  
excelled as a dressing  
and does not soil the  
headwear. It removes  
Scurf and Dandruff,  
keeps the scalp healthy,  
and promotes the natu-  
ral growth of the hair  
while maintaining its  
softness and brilliancy.

Prices for Wholesale and Export  
Houses on application.

Jackel et Cie (of Paris)

Ltd.,  
Sauchiehall Street,  
GLASGOW.

Better and More Regular Profits

IF YOU USE

# PREEMO

CONCENTRATED ESSENCES & COMPOUNDS

for making up all kinds of Toilet  
Preparations, Hair Washes,  
Toilet Waters, Eau de Cologne,  
Perfumes, Pomades, Creams, etc.

PREEMO ESSENCES impart to all Toilet Prepara-  
tions in which they are used a delightful charm  
and fragrance quite of their own. Your customers will  
be delighted with them and will return again and again  
for "another bottle like the last." They are highly concentrated, and,  
therefore, very economical, and being  
ready for immediate use they require  
no filtering, mixing, or blending be-  
forehand. Used by the leading  
chemists throughout the world.

Have you a copy of  
the PREEMO BOOK  
of SIMPLE RECIPES  
Contains over 100  
useful recipes for  
making all kinds of  
Toilet Preparations.  
Price, post 10 6  
free...

PREEMO CONCENTRÉ & ESSENTIAL OIL CO.

63 High Holborn, W.C.1. Telephone: Chancery 8095.

AND AT PARIS AND NEW YORK.



# DEARBORN

LIMITED

37 Gray's Inn Road, LONDON, W.C.

## Toilet Specialities.

	Price per doz. to Retailer.	Selling Price P.A.T.A.
PILENTA SOAP A complexion soap.	10/-	1/-
PROLACTUM For the lips.	10/-	1/-
PARSIDUM JELLY For wrinkles.	10/-	1/-
ALLACITE of ORANGE A dressing cream.	22/6	2/6
BLOSSOM BORANIUM A hair tonic.	22/6	2/6
SILMERINE Hair curling fluid.	22/6	2/6
CLEMINITE For a face lotion.	22/6	2/6
COLLIANDUM For a face tint.	22/6	2/6
PERGOL A deodorant.	22/6	2/6
STALLAX For a shampoo.	22/6	2/6
JETTALINE For clearing the skin.	31/6	3/6
PHEMINOL A depilatory.	36/-	4/-
TEKKO PASTE Camphor cream.	22/6	2/6
MENNALINE For the eyelashes.	36/-	4/-
MERCOLIZED WAX A face cream.	31/6	3/6
STYMOL For oily complexions and blackheads.	36/-	4/-
BARSYDE Dandruff eradicator.	22/6	2/6
TAMMALITE For grey or faded hair.	22/6	2/6
LIQUID PERGOL To check excessive perspiration locally.	31/6	3/6
BICROLIUM For whitening the hands.	22/6	2/6
COCONOIDS For figure development.	31/6	3/6
HARAPOSA Nut oil shampoo.	22/6	2/6

STOCKED BY ALL WHOLESALE HOUSES

### COLONIAL DEPOTS AND AGENCIES:

- AUSTRALIA:**  
ALL WHOLESALE, and  
DEARBORN, Ltd., Grace House, Clarence Street, Sydney.
- SOUTH AFRICA:**  
LENNON, Ltd.  
SIVE BROS. & KARNOVSKY, Ltd. (Johannesburg).
- INDIA:**  
KEMP & CO., Ltd. (Bombay).  
THE INTERNATIONAL TRADING CO., Princess Street (Bombay).  
R. MACLURE (Madras).  
SMITH, STANISTREET & CO. (Calcutta).  
MEHTA BROS. (Calcutta).  
JAMNADAS BROS. (Bombay).
- NEW ZEALAND:**  
SHARLAND & CO., Ltd. (Auckland & Wellington).
- SOUTH AMERICA:**  
DEARBORN, Ltd., Calla Salta 264, Buenos Aires.

# Have you accepted FORHAN'S FREE GOODS OFFER

?

Our offer of free saleable supplies of Forhan's For the Gums has evoked from the trade widespread interest and approval.

We are making this offer to secure your fullest co-operation in selling Forhan's—to secure your shop window as a link between the public and Forhan's advertising.

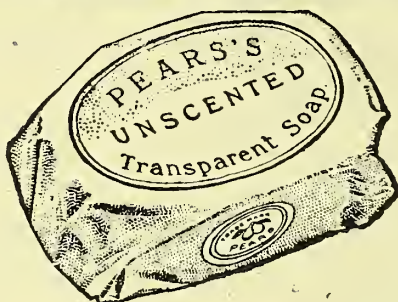
If you have not yet received through the post particulars of this exceptional offer, lose no time in writing us for particulars.

Thos. Christy &amp; Co.,

4-12 Old Swan Lane,

London, E.C. 4.





*Pears' Advertising is scientifically distributed to appeal to the largest number of possible customers. This helps you considerably.*

*Pears*

A. & F. Pears, Ltd., 71-75, New Oxford Street, London, W.C. 1.

**SELF-FIXING  
HERMETIC  
WASHABLE  
BOTTLE CAPS**

ARE  
ELEGANT  
—EFFICIENT  
—STRONGEST  
—CHEAPEST  
and BEST.

**The VISCOSE**  
Development Co., Ltd.  
BROMLEY :: KENT.

**DELIVERIES FROM STOCK.**

OINTMENT POTS. :: DROP BOTTLES.  
CORN SOLVENT BOTTLES. EYE BATHS.  
CACHETS AND CLOSING MACHINES.  
EYE SHADES. :: FINGER STALLS.  
RUBBER GOODS. CELLULOID GOODS.  
HOUSEHOLD THERMOMETERS.

**G. HEISER,**

The Telma Mfg. Co.,  
182 Kingsland Road, LONDON, E. 2.

## THE EVAN WILLIAMS' EMULSIFIED COCOANUT OIL SHAMPOOS

*in liquid form (2 sizes)*

*in powder form (packets)*

They are well up to the Evan Williams' standard of production, sell freely, and give a handsome profit.

Write for "The Shampoo Salesman," which gives full details of all our Preparations.

**THE EVAN WILLIAMS CO., LTD., 18 & 18a Ogle Street, LONDON, W.1.**

*The largest Shampoo Specialists in the world.*



# *A Calox Customer Is A Good Friend of Yours*



Calox—The Oxygen Tooth Powder—gives such definite and satisfactory results that your customers will continue to demand it. This makes Calox a dependable source of profit to you. All because Calox is a tooth cleanser—not a confection—and the most effective agent ever discovered for cleansing the teeth.

Calox can be obtained from the following representatives:

*British Depot*

Messrs. G. B. KENT & SONS, Ltd.  
London, E. C., 75 Farringdon Road

*French Depot*

Messrs. ROBERTS & CO.  
5 Rue de la Paix, Paris

*Canadian Depot*

Messrs. LYMANS, Ltd., Montreal

*Newfoundland Depot*

DIRECT AGENCIES, Ltd., St. Johns

## *A Few of the McK & R Specialties*

### **McK & R Mosquitone**

Keeps mosquitoes away and heals the bites. An efficient repellant in solid form, not sticky nor greasy. Pleasant odor and non-staining. Packed 1 dozen in display box.

### **McK & R Milk of Magnesia**

In perfect colloidal form, bland and tasteless. Free from soluble salts. 8 and 16 ounce bottles.

### **McK & R Aspirolithine**

A combination of aspirin with acid lithium tartrate and citrate. Very effective for relief of muscular pain, and for rheumatism, neuralgia, sciatica and gout. Prescribed by many leading physicians. In bottles of 50 tablets.

### **McK & R Cold and Grippe Tablets**

A wonderfully, prompt acting remedy for influenza and grippal colds. Allays the heaviness in the head and the super-secretion of mucus in a few hours. In S. C. bottles of 30 tablets.

**McKESSON & ROBBINS**  
INCORPORATED

*Manufacturing Chemists*

Established 1833

New York, U. S. A.

# Druggists' Sundries

## SPECIAL BARGAINS

### LADIES' DRESSING COMBS.

No.		ins.	per doz.	s.	d.	No.		ins.	per doz.	s.	d.
103	Black celluloid	7½ × 1½	6	6		118	Black vulcanite, burr grailed	8 × 1½	10	0	
171	White	7½ × 1½	6	6		116	Shell celluloid	7½ × 1½	8	6	
102	Black	8 × 1½	7	6		195	Black vulcanite, stout	8 × 1½	12	6	
121	" burr grailed	7½ × 1½	7	6		228	Horn, stout	8 × 1½	18	0	

### LADIES' RAKE COMBS.

No.		ins.	per doz.	s.	d.
224	White celluloid	8 × 1½	8	0	
119	Black burr grailed	8 × 1½	10	6	
196	Black vulcanite	8 × 1½	12	6	
117	White celluloid	7½ × 1½	15	0	

### LADIES' HANDLE COMBS.

No.		ins.	per doz.	s.	d.
104	Black celluloid, burr grailed	8 × 1	10	6	
105	White	8 × 1	10	6	
216	Black vulcanite	8½ × 1½	24	0	

### GENTS' COMBS.

No.		ins.	per doz.	s.	d.
165	Black celluloid	6½ × 1½	6	0	
140	White	7 × 1	7	6	
143	Black vulcanite, stout	7 × 1	7	6	
291	Horn	6¾ × ¾	8	0	
241	"	6½ × 1	9	0	
309	White galalith	6¾ × 1	9	0	

### SMALL TOOTH COMBS.

No.		ins.	per doz.	s.	d.
250	White galalith	3 × 1½	3	0	
239	" celluloid	3 × 1½	4	6	
232	Black	3½ × 2	5	6	
176	White galalith	3½ × 2	6	6	
177	Blonde galalith, extra fine teeth	3½ × 2	6	6	
192	Black vulcanite, grooved	3 × 1½	5	0	
202	"	3½ × 2	7	6	

A discount of 5% for prompt cash is allowed on all amounts of 10/- and upwards. Money returned if goods are not satisfactory. Write for illustrated price lists, post free for the asking.

**BURGE, WARREN & RIDGLEY, LTD.**  
91 & 92 GREAT SAFFRON HILL LONDON, E.C. 1.

**"Newbery's"**  
FRANCIS NEWBERY & SONS LTD.

### COMPLETE RANGE OF

Packed Pharmaceuticals,  
Toilet Preparations,  
"Own Name" Packed Goods.

### SUNDRIES—

Best British Tooth Brushes,  
Hair Brushes, and Shaving  
Brushes. Mirrors,  
Manicure Requisites, etc.

**FRANCIS NEWBERY**  
& Sons, Ltd.  
LONDON & CARDIFF.

## TUSKOID

Superfine Cut—Non-Inflammable.

Fine Tooth Combs.

8/- 10/- 12/- per dozen.

Glass-fronted Showcase free with 3 dozen Combs,  
£1 10 0

### MAZEPPA

### ENGLISH MADE TOOTH BRUSHES

Transparent. Three Colours.

4 Row; Best Bristles ... 11/6 doz.  
3 Row, Children's... 8/- doz.

### GENUINE IVORY

### FOLDING POCKET MANICURES

Containing Nail File, Toothpick and Cuticle Spoon.  
8/- doz. carded.

### BONE NAIL FILES

Assorted sizes. 1 doz. on card. 3/- per card.

**H. J. LEE & CO.**  
Osborne Works, LANCASTER.





## We Welcome Your Requests *for* Sales Help

Did you double your turnover in Gibbs Productions last year? If not, you are not getting your fair share of the extra business generated by our Advertising. Make sure that you get your share for 1922.

Our 1921 advertising expenditure produced excellent results for all of our friends who co-operated this way.

For 1922 our efforts are augmented both in volume and scope. The "Ivory Castle" idea is being extended in national and provincial press, poster and film advertising.

Linked with this publicity is a new and attractive series of showcards, cut-outs, folders, leaflets, etc.

Use of these sales-helps will connect your pharmacy with Gibbs advertising, will say to every passer-by: "You have probably read of Gibbs Toilet Preparations; here they are."

We welcome your requests for any Sales-Helps you may need. Co-operate with us and make 1922 the best year you have ever had.

Write to  
**D. & W. GIBBS,  
LTD. (Dept. S15)  
City Soap Works,  
London, E. 1.**

*Gibbs Dentifrice*  
*and other Toilet Preparations*



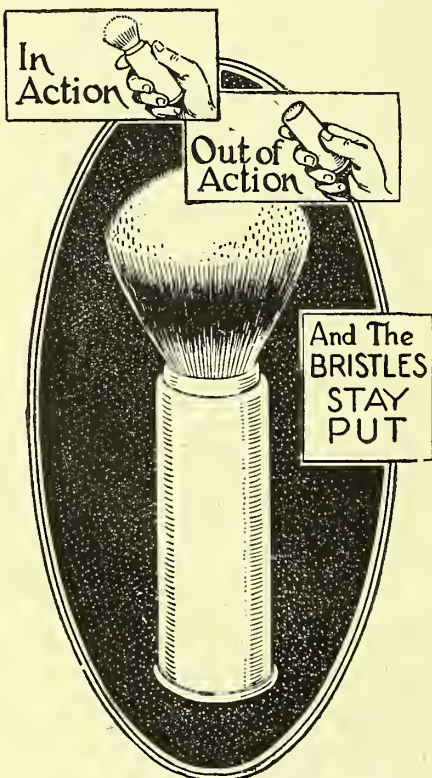


" MASTERPIECE "

Patent Travelling

# SHAVING BRUSHES

IN ONE PIECE NO LOOSE PARTS  
EACH IN BOX EACH GUARANTEED



7/6, 13/6, 15/6, 17/6 & 25/-  
RETAIL. DISCOUNT 33 1/3 %.

Showcards Supplied.

ORDER A RANGE TO-DAY.

W. H. CALNAN & Co., Ltd  
30-32 LUDGATE HILL, E.C. 4.



*Big Profits are  
waiting for you*

PROFITS from Sorbo Sponges are quick profits, sure profits, and safe profits. The public are steadily buying Sorbo Sponges in ever increasing quantities.

There is an almost unlimited business to be done in them. Every single person who enters your shop is a prospective customer for the Sorbo Sponge. If they use a sponge they need a Sorbo Sponge, and there's 33 1/3 % for you on every one you sell.

Send your  
order  
to-day

**Sorbo Sponge**  
THE MOST ABSORBENT RUBBER SPONGE

RETAIL PRICES: No. 1, 1/3;  
No. 2, 2/-; No. 3, 3/-; No. 4, 5/-;  
Bath sizes No. 4R, 7/6; No. 5, 10/6.

Sorbo Rubber-Sponge Products, Ltd.  
24 WALBROOK, LONDON, E.C. 4.

Telephone:  
City 9372.

Telegrams:  
"Osorbeau, London."



# Our Advertising Still Goes On

creating new customers for the Pro-phy-lac-tic Tooth Brush in the YELLOW BOX—customers ready and able to buy “the only brush that really cleans the teeth.”

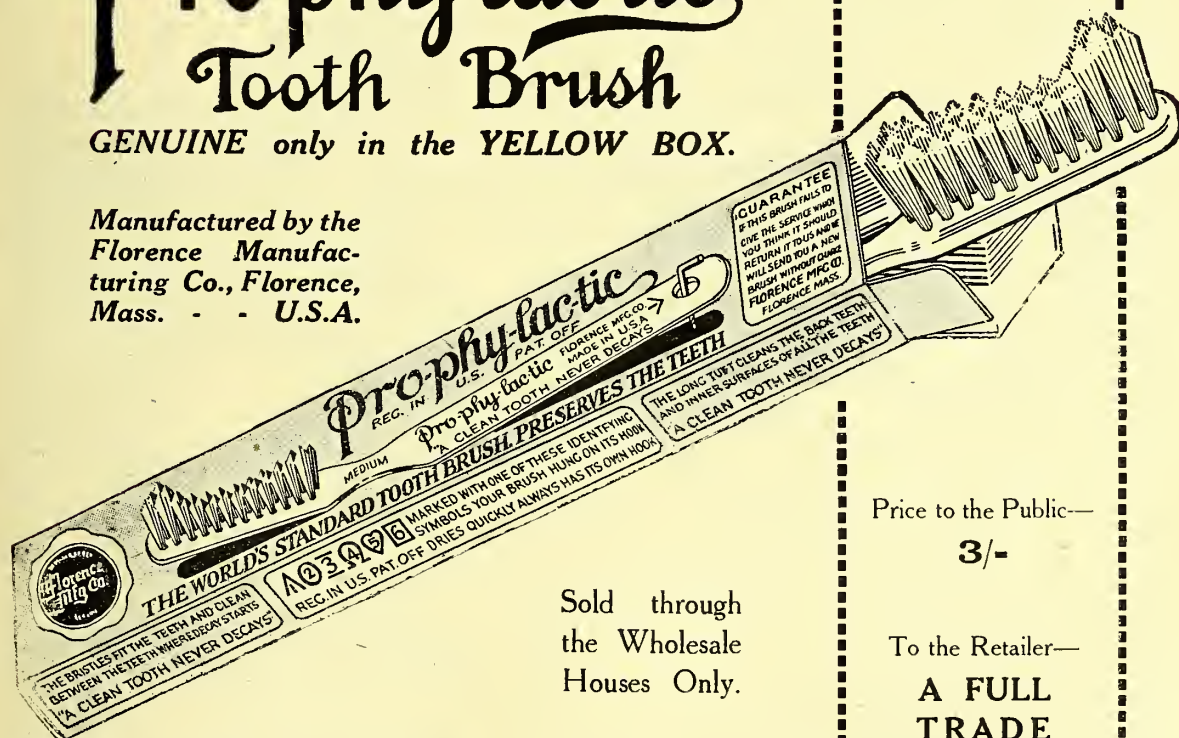
**Note the Papers.**—Daily Mail, Daily Mirror, Daily Sketch, Manchester Daily Dispatch, Nash's Magazine, Sketch, Tatler, Bystander, and the leading Dental and Trade Journals.

Well over 4,000,000 people are constantly reading about the unique merits of the

## Pro-phy-lac-tic Tooth Brush

GENUINE only in the YELLOW BOX.

Manufactured by the  
Florence Manu-  
facturing Co., Florence,  
Mass. - - U.S.A.



Sold through  
the Wholesale  
Houses Only.

In 3 sizes—adult's, youth's, and child's; in 3 textures of bristles—hard, medium, or soft; one quality only—each in its individual Yellow Box with hook for hanging.

Price to the Public—

3/-

To the Retailer—

A FULL  
TRADE  
PROFIT.

**WILLIAM E. PECK & CO., Inc.**  
31 Bartholomew Close, LONDON, E.C.1.

Question :

Where is it possible to obtain better value in

**SPONGES**

than at Marcuson's ?

Answer :

*Nowhere.*

MARCUSON BROS. & CO.,

**SPONGE**

IMPORTERS, EXPORTERS, MERCHANTS,

32 MINORIES :: :: LONDON, E.1.

Phone : Avenue 840.

Wires : "Pantalaria, Ald, London."

NO CONNECTION WITH ANY OTHER FIRM.

# SPONGES

Why not buy direct from  
Actual Importers, and thus  
save intermediate profits ?

Write for prices of  
Honeycomb and Brown  
Turkey Sponges in  
original cases.

**CHIAPAS,** Soc. Anon.,

32 QUEEN VICTORIA ST.,  
LONDON, E.C. 4.

Telephone : City 5824.

REDUCED  
PRICE



**3/3** PER DOZEN.

## MIRROR NAIL STONES

IN THE ORIGINAL  
HINGED ALUMINIUM BOXES  
IN SHOW BOXES OF 1 DOZEN.  
Stocked by ALL LEADING WHOLESALERS.

MADE ONLY BY  
**SOLPORT BROTHERS, Ltd.**  
184-190 Goswell Road,  
LONDON . E.C. 1



# Your Customers are looking for these



## IODISED THROAT TABLETS

A well-recommended line that is in big demand. Packed in tins or wedge-shaped bottles. Made to the popular formula and contains correct percentage of Iodine.

Tins 54/- gross. Bottles per gross 78/-



## INFLUENZA TABLETS

May also be labelled Cinnamon and Quinine Tablets, which name gives you the formula, which is recommended as being the best for the purpose. Packed in show outers.

72/- gross.

## CINNAMON TABLETS

A very big seller for influenza, cold in the head, &c. The tablets are made to the Formalin with Cinnamon formula. Attractive show outers supplied with all orders.

3 doz. 6/9 doz. 12 doz. 6/6 doz.



## MENTHOL AND LICORICE PELLETS

'Zonix' Pellets are unsurpassed in the trade for quality and appearance. Not compressed, but small cushion-shaped pellets, strong in menthol. Two sizes.

Small 27/- gross. Large 42/- gross.

## MOORLAND CATARRH JELLY

This popular line is a jelly packed in a tube with suitable introducer for inserting into the nostril. A line to strongly recommend.

3 doz. 6/6 doz. 12 doz. 6/3 doz.



## AMM. QUININE TABLETS

These tablets really contain the Ammonia. Triturate in a mortar and note for yourself. Splendid showcards and show boxes supplied.

	25's	50's	100's
Half Dram. -	6/-	10/-	16/6 doz.
One Dram. -	8/-	13/6	24/- ..

## SORE THROAT TABLETS

These are very cooling and astringent, agreeably flavoured and appeal to those who do not like Formalin Tablets. One of the best winter tablets we offer. Good Show Outers.

3 doz. 6/3 doz. 12 doz. 6/- doz.



**W.B. CARTWRIGHT LTD.**  
 RAWDON LEEDS  
*Australia:* 497-299 CASTLEREAGH ST SYDNEY  
 320, FLINDERS LANE, MELBOURNE  
*New Zealand:* 181, HEREFORD ST. CHRISTCHURCH  
 CORNER ALBERT & DURHAM ST'S AUCKLAND

LONDON:  
 37 RED LION ST., HIGH HOLBORN.  
 Tele.: Chancery 7416.

GLASGOW:  
 65 BATH ST.  
 Tele.: Douglas 459.



# QUALITY PREDOMINATES

WITH the help of our advertising you have to sell these products the first time only. The second and each successive sale is assured by the quality of the goods themselves. Never be out of stock of these quick-selling, rapidly moving lines. Recommend them with confidence and remember—*every sale means a pleased and satisfied customer.*

## REUDEL BATH SALTRATES AND ALKIA SALTRATES

THE BATH PREPARATION PAR EXCELLENCE. cures Corns and all Foot Troubles permanently, stops Rheumatic or other aches and pains within ten minutes.

The acme of perfection in Salines. Unrivalled for Liver, Kidney, Stomach, Blood and Intestinal Disorders.

Sells at 2/- and 3/3 (P.A.T.A.)

Sells at 3/3 a large bottle (P.A.T.A.)

These products simply will not stay on the shelf.

## SOME TRULY REMARKABLE TESTIMONY FROM CHEMISTS

READ THESE LETTERS IN SEQUENCE:

**CHARLES ROBERTSON**  
CHEMIST AND PHOTOGRAPHIC DEALER.  
115, Market Street, ST. ANDREWS.  
Telephones Shop No. 172. House No. 173. Street Bell.

Feb. 9th 1919.

Messrs. Saltrates Ltd.,  
Euston Buildings,  
London. N.W.1.

Dear Sirs,

Please send enclosed order carriage paid.

Reudel is very restless. I have difficulty in keeping it on the shelf.

This may interest you:- At the same time I received an order for Reudel by post yesterday, I had a customer at my counter calling for a second packet. A few moments after, another customer called for 3/3 Alkia.

In less than a quarter of an hour I had realised 3/1 profit, from your advertising. Very interesting, that, isn't it? I am always interested in results from advertising, being a keen believer in printers ink.

Yours very truly,  
*Charles Robertson*

**W. W. CORNISH, M.P.S.**  
THE PEOPLE'S CHEMIST  
The Oxford Pharmacy 188 Lower Ashley Rd.  
BRISTOL  
April 24th 1920

Messrs. Saltrates Ltd.  
Euston Buildings,  
London. N.W.1.

Dear Sirs:- I was reading through reproduction of Mr Robertson's (St Andrews) letter on page twelve of to-day's date Chemist & Druggist and I think this afternoon I surpassed his feat, in my shop as above. Four customers following, purchasing Saltrates preparations, as follows.

2/- Reudel Bath Saltrates	all in
3/3 Alkia Saltrates	five
2/- Reudel Bath Saltrates	minutes
3/3	or so.

Later on in the day I was asked for another 2/- size Reudel, but in this case the customer would not take the 3/3 size, so I missed the sale, having just sold the last small package. I am quite prepared to admit that this is a coincidence that does not often occur, and probably was in part due to other brother Pharmacists being "Sold out". But your preparations are always good sellers with me.

I thought the foregoing would interest you, and it is absolutely authentic, as my Lady Assistant can witness. If the "Tale wants adorning" and I say "point a moral", I would any never lose up your shelves with goods that stick there. But to borrow Mr Robertson's "Natty phrase fill up with 'restless' goods, which are restless to the point of removal for "Cash Till Food".

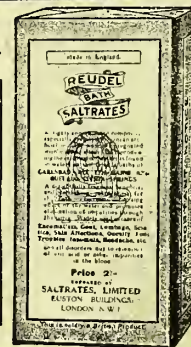
With compliments,  
Yours faithfully *W. W. Cornish*

Note.—The above statements were sent to us without solicitation of any kind.



YOU can stock these goods on Guaranteed Sale Terms. Carriage Paid in United Kingdom on orders for 3 dozen and over, which may be assorted. Special Terms for Window and Counter Display.

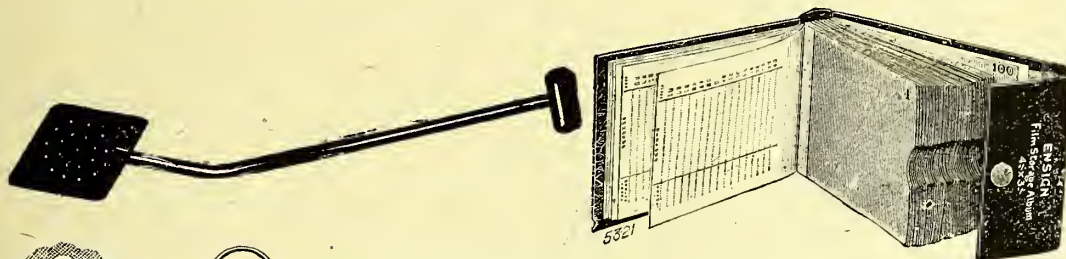
**SALTRATES LIMITED**  
Euston Buildings, LONDON, N.W. 1.





# ENSIGN

## New Photographic Supplies.



"ENSIGN" PRINT LIFTER, its use prevents fingers carrying Hypo to Developing Dish ... 2/9

"ENSIGN" PASSE-PARTOUT GOODS  
Hangers—Brass Ring, pkt. 25 1/-  
" Adhesive Cloth, ,, 18 9d.  
Binding — various colours, 12 yard roll ... 6d.  
Complete Outfits—No. 1, 7/6;  
No. 2, 9/6; No. 3 ... 13/6

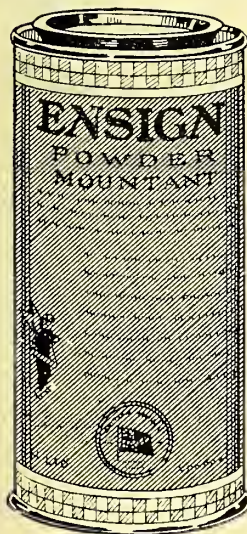
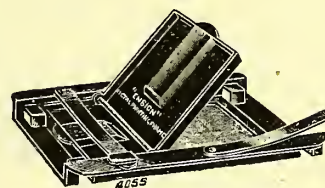
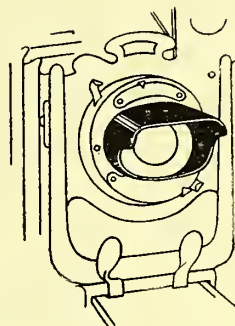
"ENSIGN" PASSE-PARTOUT FRAMES  
—Grey Velour front, 4-way strut, slip in. Good selling line, 13B for V.P.K., 9d.; 15B for  $3\frac{1}{4} \times 2\frac{1}{4}$ , 1/-; 16B for  $4\frac{1}{4} \times 2\frac{1}{4}$ , 1/2; 17B for  $\frac{1}{4}$ -plate, 1/3; 20B for Post Cards ... 1/3

"ENSIGN" POWDER MOUNTANT requires only cold water to make reliable mountant ... 1/-

"ENSIGN" FILM STORAGE ALBUM a new and improved series, greatly reduced prices.

"ENSIGN" "B.G." LENS HOOD, a self-fitting sky shade that all Amateurs want,  $1\frac{1}{4}$  in.,  $1\frac{1}{2}$  in. (either) ... 1/-

"ENSIGN" METAL PRINTING FRAME the best on the market,  $3\frac{1}{2} \times 2\frac{1}{2}$  to  $5\frac{1}{2} \times 3\frac{1}{2}$ , from ... 2/-



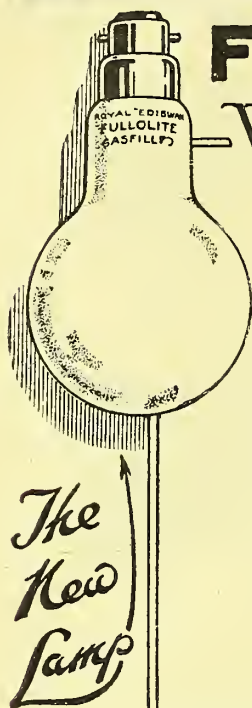
DON'T OVERLOOK THE GREAT  
£3,000 COMPETITION.

## HOUGHTONS THE WHOLESALE

ENSIGN HOUSE,  
88-89 High Holborn, London, W.C.1  
And 70-78 York St., Glasgow.







# FULLOLITE

## Without Glare

Ask at once for full particulars of the new Royal "Ediswan" Fullolite Lamp. It is the latest and greatest of all electric lamp developments. It entirely abolishes the glare and brilliance of ordinary lighting, and in its place gives a soft diffused light full of beauty.

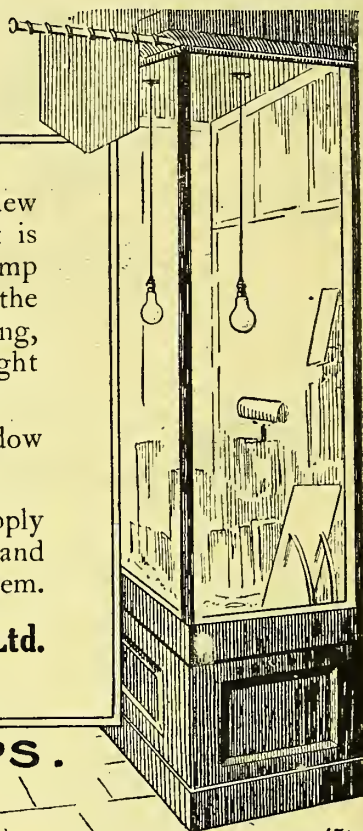
Its value for such purposes as window lighting is tremendous.

If your electrical contractor cannot supply you, send us a postcard giving his name and address, and we will see that you obtain them.

**The EDISON SWAN ELECTRIC Co. Ltd.**  
Ponders End, Middlesex.

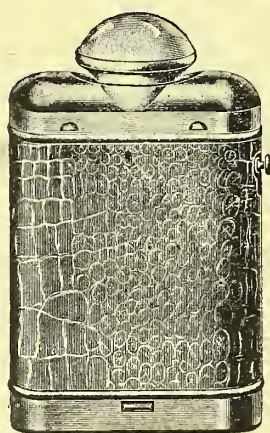
### ROYAL "EDISWAN" LAMPS.

Fully licensed under Patents  
Nos. 23199/09, 10918/13 and others.



# THREE STAR

## ELECTRIC SPECIALITIES



ILLUSTRATED PRICE LIST ON APPLICATION.

**SUNLIGHT MANUFACTURING CO., LTD.**  
PAXTON ROAD, TOTTENHAM, N.17.

Telephone: Tottenham 2208.

Telegrams: "Sumabatty, Tottlane, London."

Sole Agents for Scotland: SIMPSON, ARCUS & CO., 6 Douglas Street, Glasgow.



## THE DANGER OF THE RAT MENACE

is still with us. Continuous and systematic effort is essential if the rat population is to be appreciably reduced. A proved efficient remedy for the rat nuisance is

**"RODINE"**  
THE RAPID RAT REMOVER

### THE PIPER O' PERTH

Mr. N. Armitage, Chemist, Hipperholme, writes: "You may depend upon me to push 'Rodine' whenever an opportunity presents itself, as I believe it to be a good article, and the profits shown make it a worth-while line."

### A WORTH - WHILE LINE.

"Rodine" is the easy-selling, attractive and profitable side-line. It requires no signature, and yields nearly 100% protected profit. Get a fresh "Piper" bill for your window, and keep it prominently displayed. It pays to push "Rodine."

Sole  
Maker: **HARLEY** Manufacturing  
Chemist,  
PERTH, SCOTLAND.

## CANNON'S CORNER



EVERY WEEK YOU  
WILL FIND HERE  
SOMETHING GOOD

SO many Chemists have applied for participation in the Special Offer I made last week that my stock of Gillette Blades is exhausted. I am expecting fresh supplies in the course of a few days, and orders will then be executed in rotation.

REMEMBER MY PRICES!

### GENUINE GILLETTE BLADES.

Made in Canada. Made in U.S.A.

Box of 10 doz. **33/6** **36/-**

SEND YOUR ORDER AT ONCE

**H.A. CANNON**, AGENT AND  
IMPORTER.  
27, CANNON ST., LONDON, E.C.4  
Telephone: City 8974

### BATTLE'S VERMIN KILLER

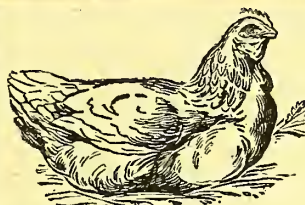
In packets at  
5d., 9d. & 1/3 each.  
(P.A.T.A.)

Of all Patent  
Medicine Houses at **BATTLE, SON & MALTY,**  
3/-, 5/6 & 9/- doz. **LINCOLN.** T.A.: "Battles, Lincoln."  
T.N.: Lincoln 26.

Remarkable evidence  
of the destructive pro-  
perties of this well-  
known preparation:

The Manager of one of the  
largest Corn Exchanges in  
England writes:—

"I mixed a 1/3 packet of  
Battle's Vermin Killer with a  
little baked flour and next  
morning picked up  
**60 DEAD MICE**  
all near where the poison was  
laid."



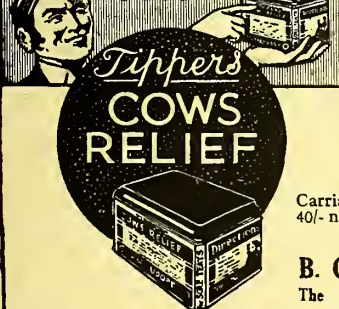
FINEST  
QUALITY.  
PERFECTLY  
SOUND  
CONTAINERS

## WATER GLASS

FOR EGG PRESERVING

It will pay you to write  
**Tomlinson & Hayward, Ltd., Lincoln.**

Every Wise Farmer  
Uses



*Tipper's*  
**COWS  
RELIEF**

RETAIL PRICES :  
3/-, 7/-, 15/-, and  
23/- per tin.

Invoiced to the Trade  
at  
2/9, 6/6, 14/6, and  
22/6 respectively,  
and subject to 20%  
discount.

Carriage paid on orders of  
40/- net. Postage charged on  
small lots.

**B. C. TIPPER & SON,**  
The Veterinary Chemical Works,  
**BIRMINGHAM.**

## SHOWCASES

UPRIGHT CENTRE CASES, WALL CASES,  
**GLASS COUNTERS, MIRRORS,**  
WINDOW FITTINGS, GLASS SHELVES,  
**SHOW STANDS, DRAWERS, DESKS,**  
CHECK TILLS, &c. **Immense Stock.**  
**NEW and SECOND-HAND.**

Ready for Immediate Delivery.

For Sale or Hire.

**FREDERICK MAUND,**  
169 Old St., LONDON, E.C.1.



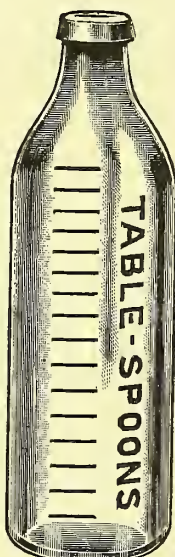
The **W** Brand of Hand-Moulded

**BOTTLES**

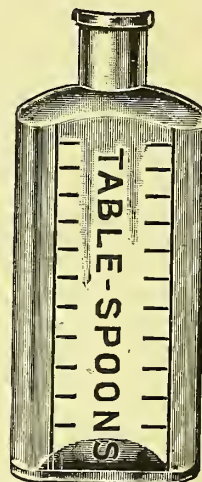
AND

**MEDICAL  
GLASSWARE**

*Free from dangerous "frosted glass."*



STERILIZING  
MILK BOTTLE.



DISPENSING  
BOTTLE.

*Finest Quality Dispensing Bottles,  
Poisons, Cheltenham, Chest Squares,  
Shop Rounds, and Bottles for  
Proprietary articles, in various colours.  
Feeding Bottles and Sterilizing Milk  
Bottles in Heat-Resistant Glass.*

Wholesale only—

**WOOD BROS. GLASS CO. LIMITED,**  
(Established 1828). **BARNSELY, ENGLAND.**

## GLASS BOTTLES.

We have the following bottles IN STOCK  
and are prepared to clear at very cut prices:

Gross			
70	2-dram.	White Flint Vials	
300	1/2-oz.	"	"
300	1-oz.	"	"
50	1 1/2-oz.	"	"
350	2-oz.	"	"
70	2-oz.	"	Limes
20	3-oz.	"	"
50	6-oz.	"	"
60	8-oz.	"	"
100	10-oz.	"	"
50	12-oz.	"	"
100	8-oz.	"	Kalis
100	10-oz.	"	"
50	12-oz.	"	"
50	20-oz.	"	"
50	2-oz.	"	Medical Flats, Plain
150	3-oz.	"	"
50	4-oz.	"	"
50	8-oz.	"	"
50	2-oz.	"	Mexican Flats
50	3-oz.	"	"
50	4-oz.	"	"
20	8-oz.	Blue Hexagon Poisons	
20	4-oz.	"	

**TOM LAYCOCK & Co.**  
Cabinet Chambers, Basinghall Street, LEEDS.

## P.A.T.A. NOTICE.

18 Tavistock Square, W.C. 1.

February 10th, 1922.

The following revised prices are now in force:—

### Erasmic Co., Ltd.—

	M.R.P.	W.M.P.
Erasmic Peerless & Elite Soap ...	6 1/2 d. tab.	66/9 grs.
"	less 5%, under 1 grs.	
"	6 1/2 d. tab.	61/6 grs.
"	less 5%, in grs. lots.	
" Shaving Sticks		
(Nickel Container)	1/3	120/- grs.
"		less 5%
" ditto (Blue Decorated		
Tin Container)	1/-	96/- grs.
"		less 5%

The undermentioned prices are republished for  
information. Those marked \* are revisions and will  
come into force on March 1, 1922:—

### Parfumerie Gelle Frères—

	M.R.P.	M.W.P.
3007 Glycerine Tooth Paste (small pot)	1/6	12/- doz. *
3016 " " " (large " )	2/6	20/- " *
3023 " " " (small tube)	10d.	7/- " *
3020 " " " (large " )	1/6	11/- " *
140 Tooth Soap (alum. box)	1/3	10/- " *
201 " " (Refills)	1/7	8/- " *
19 Powder La Reginette (in alum. box		
with mirror and puff)	1/6	12/6 " *
852 Lip Salve (Cerise, Rose & White)	1/-	8/6 " *
1498 Regina	7 1/2 d.	5/3 " *



# BAXL

*For the Throat and Voice*

For  
All Affections  
of the  
MUCUS  
MEMBRANE

AN  
INNOVATION

A Soothing  
and Powerful  
GERMICIDE  
in cases of  
INFLUENZA

*Manufacturers—*

**BAXL PRODUCTS LTD**  
2 CHARLOTTE STREET, TOTTENHAM COURT ROAD,  
LONDON, W. 1

## PARASITE STOCK.

On making up their returns for the past year, some chemists, we are sadly afraid, will be disappointed. They will be wondering where the profits have gone. Returns are good, and in some cases even better than the previous year, but the fact remains that their Pass Book is looking very sickly. A little reflection will soon show them where the weak spot has been all through the year, viz., far too many articles have been sold that have failed to bear their fair share of profit—a matter of two halfpennies for a penny in many cases. A glance round the shop and they meet you at every turn—the profits on the whole lot sold for the year will not pay one week's expenses. In short, **Parasite stock**. The remedy is, **push your own specialities**. Let these be the first thing a customer sees on entering your store, and the last thing going out. Those windows of yours cost a lot of money to put in. Get your money back with compound interest by showing goods which will pay your rent and taxes. We pack everything necessary to a chemist's business, and always remember that

**SPUN OINTMENTS** are used the world over.

**ROBERT BLACKIE,** SHEN WORKS, TOWER BRIDGE ROAD,  
LONDON, S.E. 1.

Telephone: HOP 2415.

Telegrams: "USHENSPUNA LONDON."

# Recommend **MUSTEROLE** for Influenza *Pains*

In this clean, convenient, white ointment is stored the active, pain-dispelling heat of oil of mustard. Tell your customers how Musterole, by virtue of this potent counter-irritant, affords sure relief to the pains of influenza.

In many cases your customers already will know of Musterole from our advertising, only [your recommendation being needed to complete the sale.

We value your recommendation—it has a cash value to you.

THOS. CHRISTY & CO.,  
4-12 Old Swan Lane, London, E.C. 4.







# The Superiority of

TRADE MARK 'TABLOID' BRAND

## Ammoniated Quinine

- (1)—The use of ammonium sulphate and calcium carbonate in Ammoniated Quinine **Tablets** as a source of free ammonia has already been exposed by us. In such products activity is sacrificed in order to claim stability, but prolonged boiling is necessary to release the ammonia content.
- (2)—Further investigations in our Analytical Laboratories disclose a remarkable **deficiency of ammonia** in some **Tablets**, as the following results show:—

Product	Percentage of standard amount of $\text{NH}_3$ present	Percentage of deficiency of $\text{NH}_3$
Tablet A	15	85
Tablet B	6	94
Tablet C	30	70
Tablet D	22	78
'TABLOID' Product, 12 months old	90	10

**Tablets** A, B, C and D were described as sugar-coated, but the amount of sugar was very small. They were really enclosed in a **concrete-like case of talc**, approximately 50% of the weight of the tablet.

- (3)—'TABLOID' Ammoniated Quinine is **absolutely free from talc**, but well coated with pure sugar. This can be demonstrated by boiling a product in about 20 c.c. of dilute HCl in a small glass flask. 'TABLOID' Ammoniated Quinine completely dissolves. The talc in **Tablets** settles as an insoluble deposit.
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## Wills

MR. BENJAMIN HAVARD, Ph.C., Cross House, Newport, Pembroke, who died on October 18, left estate of the gross value of £3,158 11s. 3d., with net personalty £2,928 16s. 9d.

SIR GERMAN SIMS WOODHEAD, K.B.E., M.D., Dysart House, Luard Road, Cambridge, who died on December 29, left estate of the gross value of £6,579 7s. 3d., with net personalty £4,584 0s. 9d.

MR. LUKE CHABTREE, Lea Grange, Blackley, Manchester, managing director of J. & J. Thompson & Co., Ltd., patent-medicine dealers, Oldham, who died on April 3, has left £24,050 2s. 3d., with net personalty £18,931 15s. 2d.

INDEX TO VOL. XCV.—The index for Volume XCV., covering the second half of the year 1921, is being sent to all who have indicated that they require copies. It will be sent post-free to any of our subscribers who have not already asked for copies, if they will send us postcards intimating that they desire them.

## English and Welsh News

The Editor would be obliged if subscribers would send him marked copies of newspapers containing items of interest for insertion in this or other news sections of the "C. & D."

### Dental Registration

The Registrar of the Dental Board of the United Kingdom, 44 Hallam Street, London, W. 1, informs us that he finds that in certain cases applicants desiring to be registered under the Dentists Act, 1921, have applied for copies of the Regulations, and have then extracted and completed the forms that appear as an appendix thereto. He wishes to make it quite clear that these forms are inserted in the Regulations to comply with the Statute, but it is not intended that they should be filled up by applicants. Copies of the forms will be sent free of charge on application, and, as the pressure of work is very heavy, it would be a great convenience if a stamped and addressed foolscap envelope could be sent with the applications. No one can make a successful application who was not twenty-three on July 28, 1921.

### London Chemists' Costing System

The following are among the alterations in the February issue of the London Chemists' Costing System:

Ac. tartaric, 3s. lb.; aloe Cap., 2s. 9d. lb.; amidopyrin, 9d. dr.; ammon. benz. synth., 1s. oz.; ammon. ichthosul., 6d. oz.; amyllum (maize), 8d. lb.; anthem. flor. exot., 2s. 1d. 4 oz.; aq. lavand., 3s. 4d., 2s. 8d., 2s. 1d. oz.; argent. nit., 11d. dr.; atropin. sulph., 4d. gr.; bismuth. carb., 2s. oz.; bismuth. subnit., 1s. 9d. oz.; calc. phos. coml., 1s. 4d. lb.; camph. flor., 8½d. oz.; cera flav. Ang., 1s. 6d. 4 oz.; copaiba Maranham opt., 6s. 10d. lb.; ess. menth. pip., 3s. oz.; ext. cascar. sag. liq., 1s. 5d. 4 oz.; glycerin., 3s. 3d. lb.; glycerin. thymol. co., 2s. 8d. lb.; lin. camph., 1s. 3d. 4 oz.; lin. terebinth., 1s. 4 oz.; ol. menth. pip. redest., 2s. 9d. oz.; ol. olive, 4s. 3d., 3s. 6d., 2s. 8d. pt.; pot. iod., 2s. 7d. oz.; rad. zingib. Jam. pulv., 7½d. oz.

### Replies to a Judge

The remarks of Mr. Justice Rowlatt at the recent Cornwall Assizes (*C. & D.* February 4, p. 43) to the effect that it was a question whether the law governing the sale of poisons did not need overhauling, has promptly evoked replies from pharmacists in the daily Press. Mr. H. G. Toy, President of the Derbyshire Pharmaceutical Association, and secretary of No. 1 branch of the Retail Pharmacists' Union, wrote as follows to "The Derby Daily Telegraph" of February 2:

The statement that poisons are procurable by anybody, almost anywhere, is untrue, and a gross libel on the pharmacists of Great Britain, and the further statement "that a person wishing to obtain arsenic for a sinister purpose may give a wrong name, and no questions are asked," proves that both your leader writer and Mr. Justice Rowlatt missed the safeguards imposed by the Sale of Poisons Act.

The editor of the Derby paper appended a note to Mr. Toy's letter, regretting having been misled into allowing statements based on the judge's remarks to appear. The following comment from Mr. C. A. Cofman-Nicoresti, B. es Sc. et Lett., Snaresbrook, appeared in "The Daily Chronicle" (London) of February 3:

In almost every case in which people have been brought to court on the charge of poisoning they have been traced through the chemist's poison-book, and invariably they have given their right names. The above facts prove that his lordship is not very familiar with the poison law, and that in almost every case the chemists have duly fulfilled their duty.

### Boric Acid in Sponge Cakes

The medical officer of health for the City of London draws attention, in his current report (No. 245), to the increasing use of boric acid in sponge cakes and similar articles, with the comment that an amount of preservative which might be harmless to a healthy adult might have a serious effect on infants and invalids, who are among the chief consumers of such products. The report states that seven out of twenty-two samples of sponge cakes and "fingers" recently examined were found to

B B 2

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contain boric acid in proportions ranging from 0.2 to 0.42 per cent. Samples of liquid egg and of preserved egg obtained from various Metropolitan boroughs contained from 1.1 to 1.75 per cent., and one sample of egg yolk contained 2.2 per cent. Dr Howarth adds:

Until quite recently this boricised liquid egg has been regarded entirely as an imported product, and unofficial regulations as to sale, particularly as to distribution and the use to which it could be put, could be imposed before allowing the product to be distributed throughout the country. I understand, however, that there are now in this country firms preparing boricised liquid eggs. I suggest that the above report be forwarded to the Ministry of Health, in the hope that reiteration may result in some regulation being formed which will either restrict the sale of boricised food products or clearly set out the limitation of amounts which may be used. One or other decision is necessary, and doubtless this will depend upon the view which is taken as to the harmful results which accrue from the continual dosing of the human system with boric acid. I have previously recommended that research work should be undertaken in this connection, and I beg to repeat the suggestion.

#### The Armstrong Case

At Hay, on February 3, the hearing of the case against Major Herbert R. Armstrong, remanded on January 25 on a charge of murdering his wife by administering arsenic to her and of the attempted poisoning (also by arsenic) of Mr. Oswald Martin (*C. & D.*, January 28, p. 49) was resumed. The chief witness was Dr. T. E. Hincks, who was cross-examined at some length. Suggestions as to the cause of Mr. Martin's illness, he said, were made on October 28, 1921, by Mr. J. F. Davies, chemist and druggist. Arsenic was mentioned, and the witness was told that some had been purchased from Mr. Davies's shop. In re-examination, Dr. Hincks explained how the suggestion of foul play arose. He said that Mr. Davies came into his surgery while he was attending Mr. Martin, and asked what was the matter with him. Witness said he thought it was biliousness, whereupon Mr. Davies said, "Are you sure it is that? Are you sure there is no question of foul play or poisoning?" He had tea with Armstrong the day before, and I would not trust that man a yard." Witness said he replied that he did not think it could be anything of that sort, but he would bear it in mind. Mr. Davies then said, "I only thought I would warn you, as it is always easy to be wise after the event." The hearing was again adjourned.

#### Dangerous Drug Act Cases

At Marlborough Street Police Court, London, on February 6, Ethel Smith, who refused her address, was sentenced to two months' hard labour for being in unauthorised possession of cocaine.

At Marylebone Police Court, on January 31, Mabel E. Grundy, Brooklands, Royston, was remanded on bail on a charge of forging and uttering a doctor's prescription for hypodermic tablets of morphine sulphate. At the resumed hearing, on February 7, a charge of being in unlawful possession of twenty-seven tubes of the tablets was substituted. Sir Henry Curtis Bennett, K.C., who appeared for the accused, said that she pleaded "Guilty" to obtaining thirteen such tubes. Mr. Herbert Musket, prosecuting for the Commissioner of Police, stated that each of the twenty-seven tubes obtained by the accused contained twenty tablets. The matter came to light, he said, through the action of John Bell & Croyden, Ltd., chemists, Wigmore Street, who had behaved with the strictest propriety. Some weeks ago the accused called at their shop and produced what purported to be a prescription for two tubes of morphine-sulphate tablets, signed by Eva Anne Robertson, M.B., Ch.B., Dunkeld, Perthshire. The prescription appeared to be in order, and the company, having verified the name and address, supplied the drug. The extent of further orders aroused their suspicion, with the result that the accused was arrested. The magistrate (Mr. d'Eyncourt) said the prescription was so well written that he should have immediately suspected that it was not written by a doctor. (Laughter.) It was very lucky for the community that the Dangerous Drugs Act was passed, because the tendency to take drugs

seemed to be developing on all sides. In this case the accused had not trafficked in the drug, but had used it to her own misfortune, and under all the circumstances he should fine her £25, with £3 3s. costs, and bind her and her husband over in £100 to bring her up for judgment if called upon within two years, on the distinct understanding that she would be kept under proper supervision and not allowed to obtain the drug.

#### Wine and Spirit-licence Applications

Applications for a wine off-licence made by the following pharmacists at the local Brewster Sessions were granted, subject, in each case, to an undertaking being given to restrict the sales to medicated wines: Mr. W. F. Cole, Lowestoft; Mr. F. Hodgkinson, Wigan; Mr. G. E. Pashley, Dronfield, Sheffield; Mr. J. Ravenshaw, Totnes; Mr. T. B. Brittan, Norwich.

The applications of the following were refused: Mr. H. C. Biltcliffe, Darton; Mr. P. G. Dales, Mapplewell; Mr. J. Malley, Layton, Blackpool.

At Norwich, on February 7, Mr. Joseph de Carle Smith, chemist and druggist, 44-48 Magdalen Street, was granted a licence authorising him to sell rectified spirit.

Unsuccessful objection was raised at Richmond, Surrey, on February 7, to the renewal of a wine off-licence held by the manager of a local branch of Parke's Drug Stores, Ltd. The objector, a lady, pleaded that "Mr. Parke was dead." A magistrate pointed out that the licence had been in existence for many years.

#### Repetition in Advertising

Among a number of interesting articles in the current issue of "Bubbles" (A. & F. Pears, Ltd.) is one on "The Value of Repetition in Advertising," by Mr. H. T. W. Bousfield, editor of "Pears' Annual." Mr. Bousfield writes:

The value of repetition depends first upon having something worth repeating. Next, you should endeavour to repeat not only the advertisement but its position—having first found a good one. Finally, having established your lay-out, or your style of illustration or type-setting, so that even the most careless will recognise it—finally you may vary your copy. Remember that you will be wise always to discount by half the amount of notice which even your chastened experience leads you to imagine that any advertisement will command.

Other items include an account of the unveiling of a war memorial at the New Oxford Street premises, and a report of the presentation ceremony in connection with the retirement of Mr. H. W. New (*C. & D.*, II., 1921, p. 690). "My First Order," from the pen of Lord Dewar, chairman of the company, is full of characteristic humour and *savoir faire*; and other directors contribute suggestions of interest to a wider circle than that to which they are primarily addressed.

#### Birmingham

The demand for packed lines, chiefly in connection with influenza, is so brisk that in one local wholesale house it has necessitated the working of overtime.

The news of the death of Sir Alfred Bird (see p. 51) was received with profound regret throughout the Midlands, where he was well known and highly esteemed.

An effective tooth-brush holder is being used for display purposes by a suburban pharmacist. It consists essentially of a triangular frame surmounted by wire netting through which the brush-handle is inserted.

It is curious to note the number of birds requiring either magnesium sulphate or chemical food, according to the answers to correspondents on the subject of poultry-keeping given in the Birmingham "Mail."

Fred. Fowler (sixty-four), described as a manufacturer of toilet-requisites, was removed, on February 5, from his workshop in Ladywood Road to the Dudley Road Infirmary. His relatives, if any, have not been traced.

#### Bradford

Stocks of dyes and chemicals were among the goods destroyed by the recent fire in Cheapside.



The Bradford Chamber of Commerce, which some years ago set up an arbitration committee to deal with trade disputes, has been instrumental in saving traders considerable sums of money in litigation costs of late. The arbitrators in each case have a thorough knowledge of the class of goods to which the dispute refers, and their services are gratuitous. By co-operation between the Chamber and the New York State Chamber of Commerce, several suits which ordinarily would have been heard in New York courts have been similarly settled.

### Liverpool

Mr. Harold Nixon, a director of Ayrton, Saunders & Co., Ltd., Hanover Street, has been re-elected a member of the council of the Rotary Club of Liverpool, and has been appointed associate-editor of the "Rotary Wheel," the journal of the British Association of Rotary Clubs.

The tragic death of Mr. R. H. West, Southport, came as a painful shock to his numerous friends in Liverpool, and especially to his fellow-members of the Liverpool Chemists' Association. At the most recent of the fortnightly meetings he spoke during a discussion on co-operative buying. He was accompanied to the station by a friend, and talked pleasantly of the changes each had seen in Southport and Birkdale. Barely a week before his death Mr. West was present at a function in Liverpool.

Giving evidence at an inquest, held on February 3, on the bodies of four persons who had died from coal-gas poisoning, Dr. Macfall (Liverpool University) said he had long suggested that the Liverpool Gas Co. should introduce some foul-smelling gas instead of carbon monoxide into the gas they supplied people. The selling of poisons was under distinct regulations, but the gas company were legally right in disseminating a deadly poison broadcast along their pipes, as their gas contained 15 per cent. of carbon monoxide. [A Government Committee's report on carbon monoxide in coal-gas was referred to in the *C. & D.*, II., 1921, p. 269.—EDITOR.]

At Liverpool Police Court, on February 1. Claude Reginald Wright, B.C., a ship's surgeon, was charged on six counts under the Regulations of the Dangerous Drugs Act, 1920, with being in unauthorised possession of morphine and with procuring from Liverpool chemists cocaine and morphine for his own use. The prosecution was undertaken at the instance of the Home Office. Evidence was given by three Liverpool chemists that the doctor purchased from them quantities of cocaine solution containing amounts of drug varying from 3ss. to 3j. In each case the prescription, marked "self," was made out and tendered by the defendant. The stipendiary magistrate remarked that there was no law against a doctor prescribing for himself, and if he prescribed for himself was he not practising his own profession? And if he prescribed these drugs, was he not getting drugs for the practice of his profession? A doctor might be wrong in the dose he used, but that was a matter for medical opinion. The case was adjourned.

### Manchester

From the list of doctors and chemists on the Manchester panel for the current year it appears that there are 204 shops on the list of persons or firms supplying medicines, drugs, and prescribed appliances.

Mr. T. Swindells, chemist and druggist, who is a recognised authority on Old Manchester, is the author of an informative series of articles on this subject appearing in the "Evening Chronicle" every Saturday.

Sir William Veno has decided to amend the offer referred to in this column of our last week's issue (p. 42), and to devote £10,000 instead to the direct assistance of cancer research work during the next ten years, the amount to be divided into annual payments of £1,000 each.

The new list of Insurance stock mixtures (called "formulary mixtures"), issued on a card, came into force on February 1. Those who were not prepared had a busy time making up the various formulas, twenty-eight in all, many of which are quite different from those

in the previous list. One panel chemist had a 'phone call on the appointed day from a colleague who had mislaid his card.

### Nottingham

At Nottingham Police Court, on February 6, Percy Mack, labourer, was placed on probation for two years for stealing a wallet and pencils, value £1 10s. 3d., from Boots, Ltd.

At a meeting of the Edwinstowe Lodge, No. 3,998, at the Masonic Hall, Bro. Spencer H. Plattin, chemist and druggist, was installed in the chair by Wor. Bro. W. Meakin, chemist and druggist, and Bro. George F. Godson (ex-President of the Nottingham Pharmaceutical Association) was invested Senior Warden. About 120 members and visitors were present, including the following pharmacists: Wor. Bro. E. C. Carr (secretary, Nottingham Pharmaceutical Association), Wor. Bro. Geo. Hare, P.G.A.D.C., Wor. Bro. G. J. R. Parkes, P.P.G.J.D. (The British Drug Houses, Ltd.), Bro. H. C. Prince, and Bro. J. W. Sampson, Ph.C.

### Sheffield

Mr. William Wharton, chemist and druggist, has purchased the business of Mr. C. H. Hallatt, chemist and druggist, at 252 Langsett Road, Sheffield. Mr. Hallatt has, owing to an illness, been ordered to Blackpool for a rest.

Mr. Herbert Antcliffe will have been in possession of his seat on the Council of the Pharmaceutical Society just twelve months by the time that the election comes round in May, and in the event of a contest will, Sheffield chemists hope, secure a good position among the seven councillors returned.

### Miscellaneous

**FALSE-PREENCES CHARGE.**—At Marlborough Street Police Court, London, on February 8, Hugh Morton (36), Cromwell Road, S.W., was charged on remand with obtaining money by false pretences, with intent to defraud, from Mrs. Carlotta Etheridge, Frith Street, W., and Agnes Marsh, Stanley Gardens, Bayswater. Mrs. Etheridge, a professional dancer, explained that in the early part of February 1921 she was suffering from internal trouble caused by dancing, and eventually she saw "Doctor Morton" (the accused), who gave her to understand that he would cure her. The accused attended her for three or four weeks, for which she paid £5 5s. Evidence was given of the purchase of surgical instruments by Morton from Cory Brothers, Ltd., Mortimer Street, W., for over £47, which accused had not paid for. A remand was ordered, bail being refused.

**IN THE COURTS.**—At North London Police Court, on February 3, Edmund H. Tunbridge was charged on remand with the murder of Margaret Evans, a domestic servant (*C. & D.*, February 4, p. 43). Albert Edward Jardine, a counterpane employed by the General Apothecaries' Co., Berners Street, W., said that he had been acquainted with the prisoner for two or three years. He asked the witness to get him some cyanide of potassium, and he did so, labelling the bottle "Cyanide of potassium, 30 per cent.—poison." It was in crystal form. It was handed to the accused on January 9. A day later the accused said he had had an accident and broken the bottle, spilling all the contents. Cross-examined, the witness said the prisoner represented that he wanted the cyanide for photographic purposes. He also spoke of an enlarging camera and asked the price of plates. He said he hoped to produce detail in negatives of snow scenes by the use of the cyanide. The accused was again remanded.—At Harlestone Petty Sessions, on February 4, Mr. Arthur H. Jeffery, chemist and druggist, Diss, was fined £3, with 4s. costs, and George Easto, his employee, was fined 10s., with 4s. costs, for respectively permitting to be worked and working a mare in an unfit condition.—At the Central Criminal Court, London, on February 2, Claud Ramsay, valet, was sentenced to eighteen months' imprisonment for having supplied noxious drugs to a woman (*C. & D.*, January 28, p. 47).



## Irish News

### Brevities

Mr. Patrick J. Moloney, Ph.C., has been unanimously re-elected chairman of the Tipperary Urban Council.

The Sligo Co. Home Committee decided at a recent meeting to make no appointment to the position of dispenser.

At the annual meeting of Larne (co. Antrim) Chamber of Trade and Commerce, Mr. John Hall, Ph.C., was elected hon. treasurer for the ensuing year.

Mr. P. O'Toole, M.P.S.I., Miltown-Malbay, co. Clare, who has been confined to bed for two months, owing to a painful illness, is now slightly better.

At the recent annual meeting of the Antrim Urban District Council Mr. F. T. Smith, J.P., R.D., was elected chairman. Mr. Smith is an ex-President of the Ulster Retail Drug Trade Association.

### Londonderry

At an inquest held at Dungiven, on the body of Mrs. Walker, who died from strychnine poisoning, a verdict of "Suicide during temporary insanity" was returned.

Councillor F. W. McCully, J.P., R.D., Victoria Drug Hall, Waterside, was thanked for his services as chairman of the committee of management at the annual meeting of Londonderry City Infirmary.

At an inquest held at Gortnacross, Dungiven, co. Londonderry, on January 30, on Mrs. James Warke, the wife of a labourer, the jury found that deceased died from strychnine taken while temporarily insane.

Mr. James Glendinning, Ph.C., Waterloo Place, who recently resigned the position of compounder at the Waterside Dispensary, is, at the request of the Londonderry Board of Guardians, "carrying on" until the appointment of his successor.

## Scottish News

### Brevities

Dr. J. F. Tocher, Ph.C., gave a lecture in Dundee, on January 31, on North-country poets and their poetry.

Mr. Donald Macaulay, 40 St. Enoch Square, Glasgow, has been appointed agent for Scotland for The Pepsodent Company.

Mr. J. H. Fisher, Ph.C., Dunfermline, has removed from 80 High Street to Number 40 in the same thoroughfare.

Mr. J. Y. McLellan, chemist and druggist, Kirkintilloch, has resigned from the secretaryship of the local merchants' association.

A lecture on the poet Burns was recently given before a local audience by Mr. G. Forbes Johnston, chemist, and druggist, Broughty-Ferry.

The chemistry and physics laboratories and optical room of Peterhead Academy were involved in a fire which broke out on January 31, and resulted in the destruction of the west wing.

At the recent examination of the California State Board of Pharmacy a certificate was granted to Mr. H. W. Caesar, chemist and druggist, formerly proprietor of Kinninmont's Pharmacy, South Portland Street, Glasgow.

Writing in the "Aberdeen Daily Journal" of January 30, "Chemist's Apprentice," after commenting on the disparity in the remuneration of chemists and doctors for insurance work, remarks that "a dustman's life seems preferable to that of a chemist and druggist." Mr. W. P. Adamson, chemist and druggist, Portsoy, continued the correspondence on the subject in the next issue of the paper.

### Edinburgh

The death is announced of Edinburgh's oldest medical practitioner, Dr. W. Craig, F.R.S.Edin., aged eighty-nine.

The balance-sheet in connection with the visit of the British Association to Edinburgh shows a surplus of £1,384, and the local executive committee recommend that, subject to the matter being submitted to a meeting of subscribers, this sum should be handed over to the University of Edinburgh to establish a fund for providing grants to advanced students in the Faculty of Science, to enable them to pursue their studies in other laboratories or museums outside Edinburgh.

Mr. R. B. Merson, whose death was announced in last week's issue (p. 53), had been in business with his father for the last two years. During the war he served in France as a private in the Machine Gun Corps, being wounded in the fighting on the Somme in 1916. After recovery he was given a commission in the 5th Gordon Highlanders, and took part in the operations in Mesopotamia. Since demobilisation he joined the 7th Royal Scots, the Leith Battalion, and was one of the two officers who went over from that battalion to the 9th on the occasion of the recent amalgamation. His death was due to pneumonia following on influenza.

## Coming Events

This section of the "C. & D." is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

### Friday, February 10

*Royal Institution of Great Britain*, Albemarle Street, Piccadilly, London, W. 1, at 9 p.m. Professor W. D. Halliburton, F.R.S., on "The Teeth of the Nation."

### Monday, February 13

*North London Pharmaceutical Association*, North Library, Manor Gardens, Holloway Road, at 8.15 p.m. Papers on "Improved Pharmaceutical Processes for the Pharmacy," with practical demonstrations. [Altered from February 14.]

### Tuesday, February 14

*Eating Pharmacists' Association*, Eden's Restaurant, High Street, at 8.30 p.m. Meeting.

### Wednesday, February 15

*Leeds Chemists' Association*. Social evening.

*Pharmaceutical Society of Great Britain (North British Branch)*, 36 York Place, Edinburgh, at 8 p.m. Evening meeting. "The Advantages of Prescribing by the Metric System," by W. C. Sillar, M.D., B.Sc., Lecturer on Experimental Pharmacology, Edinburgh University.

*Liverpool Chemists' Association*, Royal Institution, Colquhoun Street, at 8 p.m. Mr. A. J. Jones, Ph.C., on "Some Modern Methods for the Detection of Arsenic."

*The Sheffield Pharmaceutical and Chemical Society*, Church House, St. James Street, at 8.30 p.m. Mr. J. Grier, M.Sc., Ph.C., of Manchester University, on "Professional Pharmacy."

*Western Pharmacists' Association*, Pinoli's Restaurant, Wardour Street, London, W. 1, at 8.30 p.m. Dr. F. W. Crossley-Holland, Barrister-at-law, on "The Sale of Goods."

### Thursday, February 16

*Chemical Society*, Burlington House, Piccadilly, London, W. 1, at 8 p.m. Mr. A. Lapworth on "A Theoretical Derivation of the Principle of Induced Alternate Polarities"; and Messrs. W. O. Kermack and R. Robinson on "The Property of Induced Polarity of Atoms."

*London County Pharmaceutical Association*, Connaught Rooms, Great Queen Street, London, W. C. 2, at 7.30 p.m. Annual dinner. Ladies especially invited. Tickets (12s. 6d. each) from members of the County Executive, or from Mr. G. A. Tocher, 233-6 Bank Chambers, High Holborn, W. C. 1. Evening dress optional.

*Newcastle-upon-Tyne Pharmacists' Association*, Central Exchange Hotel, Grey Street, Newcastle-upon-Tyne, at 8 p.m. Professor M. C. Potter, Armstrong College, on "Vitamines."

*Peterborough Chemists' Association*, Angel Hotel, at 3 p.m. Annual meeting. Dinner at 6.30 p.m. Tickets for the dinner (7s. 6d. each) from the Secretary (Miss F. Hibbert), 46 Cowgate, Peterborough.

**MANUFACTURE OF BAY RUM.**—Articles have appeared in recent issues of the "Barbados Agricultural News" with a view to furthering the development of the bay industry. The following recipe for bay rum has been found highly satisfactory: Bay oil 33.0, orange oil 2.5, pimento oil 2, alcohol 2000, water 1500 c.c., calcined magnesia 20. The liquids are mixed, shaken with the magnesia and filtered.



## Legal Report

**Breach of Contract Case.**—In the Outer House, Glasgow, on February 2, before Lord Ashmore, Morris Ashby, Ltd., merchants, Laurence Pountney Lane, London, E.C. 4, claimed £1,450, with interest and expenses, from the North British Rubber Co., Ltd., Edinburgh, for alleged breach of contract. The pursuers stated that in November 1920 they sold to the defenders 100 tons of zinc oxide. Delivery of 50 tons of the oxide was accepted, but the remainder was refused by the defenders on the ground that they had not agreed to the pursuers' stipulation that the price must be paid in cash upon delivery. Owing to the defenders' refusal to take delivery, the pursuers instructed the sale by public auction in London of the oxide in dispute. The difference between the price realised at that sale and the price which the defenders had agreed to pay (£60 per ton) amounted to the sum claimed as damages for the defenders' breach of contract. Defences were lodged, but were withdrawn, the defenders consenting to a decree for the whole sum sued for.

## New Companies and Company News

P.C. means Private Company and R.O. Registered Office :

**F. R. BOWMAN & Co., LTD. (P.C.).**—Capital, £1,000. Objects : To carry on the business of chemists, druggists, drysalts, oil and colour men, etc. Solicitors : Wood & Sons, 31 Poultry, London, E.C.

**BAXL PRODUCTS, LTD. (P.C.).**—Capital £1,500. Objects : To adopt an agreement with N. Barron and to carry on the business of manufacturers and sellers of medicines, gargles, ointments, powders, face-creams, paints and preparations, etc. R.O. : 2 Charlotte Street, London W. 1.

**PULKERIA, LTD. (P.C.).**—Capital, £500. Objects : To take over the business of the Pulkeria Toilet and Cosmetic Co., and to carry on the business of manufacturers of and wholesale and retail dealers in chemical, cosmetic, toilet, medicinal and food preparations, etc. R.O. : Pulkeria Works, Pershore Road, King's Norton, Birmingham.

**LOUIS & BERNARD, LTD. (P.C.).**—Capital, £25,000. Objects : To take over the business of hairdressers, barbers, wig-makers, chemists, druggists, dealers in toilet and cosmetic preparations and articles, etc., carried on by L. Manson and B. Bernard at 50 King Street and 12 St. Ann's Place, Manchester, as "Louis & Bernard." R.O. : 50 King Street, Manchester.

**COMMERCIAL AND CHEMICAL SUPPLIES, LTD. (P.C.).**—Capital, £1,000. Objects : To carry on the business of manufacturers of and dealers in carbolic, creosotic, and other disinfecting, deodorising, and scouring fluids, powders, compounds, soaps, and other preparations, etc. The permanent directors are : H. Pryer, 9 The Parade, Monmouth, and E. Pugh, Melrose Cottage, St. Mellons. R.O. : 23A Mount Stuart Square, Cardiff.

**C. A. BURDETT (CHEMISTS), LTD. (P.C.).**—Capital, £300. Objects : To acquire the business carried on at 14 Regent Street, Dawlish, Devonshire, and to carry on the business of chemists, druggists, opticians, stationers, dealers in photographic supplies, extractors and adaptors of teeth, etc. The first directors are : H. F. Stapley, 45 Craven Road, Hyde Park, London, W., and C. A. Burdett, 14 Regent Street, Dawlish. R.O. : 14 Regent Street, Dawlish.

**PARR'S DYE AND CHEMICAL CO., LTD. (P.C.).**—Capital, £3,000. Objects : To acquire the business carried on by W. Pimlott and P. Andrews, as the "Consol Dye and Chemical Co.," at 62 Queen Street, Hulme, Manchester. The first directors are : J. Darrah, 259 Manchester Road, Heaton Chapel, Stockport; W. Pimlott, 10 Gordon Place, Withington; and P. Andrews, 12 Howgill Street, Clayton. R.O. : 62 Queen Street, Hulme, Manchester.

## Gazette

### PARTNERSHIPS DISSOLVED

**SIMNETT, R. E., and SIMNETT, S. R.,** 60 High Street, Beckenham, chemists.

**SIMPSON, B. L., and WELLENSTEIN, M. M.,** 118-122 Holborn, London, general merchants and chemists' sundriesmen, under the style of T. Hayden & Co.

**OWEN, W., and WHATMOUGH, W.A.,** 457 Caledonian Road, Holloway, and 108 Packington Street, Islington, London, manufacturing chemists, under the style of John Tye & Son.

### Bankruptcy Acts

#### ADJUDICATION

**ASCOLI, G. T.** (trading and described in the Receiving Order as Ascott's Drug Stores), 13 Prince of Wales's Road, Kentish Town, London.

## Business Changes

**MR. R. W. OLDLAND, Ph.C.,** has commenced business at the Broadway, Thorpe Bay, Southend-on-Sea.

**MR. R. H. BROWN,** chemist and druggist, has taken over the business of Mr. C. Fielding, Ph.C., 1 Clover Hill Road, Free School Lane, Halifax.

THE partnership formerly existing between Messrs. John G. Paton and George R. Cowell, under the name of Paton & Cowell, import and export merchants, at No. 217 Broadway, New York City, U.S.A., was dissolved on December 31, 1921.

**MR. F. LEWIS SMITH,** chemist and druggist, 75 Commercial Road, Hereford, has recently extended his premises by acquiring an adjoining tenement, which he has fitted out as a veterinary department. Mr. Smith has gained a considerable reputation in the district as a veterinary specialist.

**ARTHUR & Co.,** 21 Mincing Lane, London, E.C. 3, announce that, owing to continued ill-health, Mr. Eug. Pantanalli has been reluctantly compelled to give up control. The business is now under the proprietorship of Mr. A. L. Darville, who has been connected with the drug-trade for many years.

**MR. F. H. HEATH,** chemist and druggist, has opened a pharmacy at 30 Market Street, Kids Grove. Mr. Heath was apprenticed with Mr. E. Griffiths, Kids Grove. During the war he was for three years in the Army, becoming sergeant-instructor. He qualified in 1920, and since then has gained experience with Mr. A. A. Godkin, Tunbridge Wells; Chase & Jackson, Hereford; and Mr. Harold Smith, Cirencester.

**MR. H. L. WALTER,** chemist and druggist, is opening a pharmacy at 210 Shirley Road, Southampton. Mr. Walter was apprenticed to Randall & Son, Ltd., Southampton, and was afterwards an assistant with Glaisyer & Kemp, Brighton. During the war he was a lieutenant in the 1st King's Dragoon Guards. After service in France he transferred to the Flying Corps as a flying officer observer, and was wounded in the air. Mr. Walter passed the Qualifying examination in 1920.

**STATE ENCOURAGEMENT OF EUCALYPTUS OIL INDUSTRY.**—The Victorian State Treasurer has announced that he will advance 9d. per lb. on the distillation of eucalyptus oil. The Melbourne "Argus" strongly opposes the continued use of the resources of the Government to foster private undertakings, saying that other industries with claims as strong as those of eucalyptus manufacturers will have the right to similar treatment. The effect of this political move will be to leave the market very unstable. Distillation is almost certain to continue. No supervision over quality is indicated, and supplies will probably accumulate of a quality for which the sale is uncertain.—"C. & D. of Australasia."



## Chemical Society

THE meeting room of the Chemical Society in Burlington House, London, W., was filled to overflowing on January 19 at the occasion of the paper read by Professor Arthur Smithells, F.R.S., on *The Lewis-Langmuir Theory of Atomic Structure*; the President (Sir Robert Walker) was in the chair. Professor Smithells gave a fascinating description of this new conception of the atom, illustrated by a large number of models, which greatly helped to follow his explanations. He referred in his introductory remarks to the valuable work done by British physicists in elucidating our conception of the atom, and proceeded to demonstrate the basis of the Langmuir atomic theory. This is based upon the assumption that the atom consists of a nucleus with one or more positive charges, representing the actual element. This nucleus is surrounded by a shell composed of a varying number of sheaths, in each of which are the negative electrons. However, it must be borne in mind that these negative electrons are merely electric charges, and do not consist of matter. Thus the hydrogen atom consists of a nucleus with a positive charge, and one negative electron. The number of negative electrons which each element possesses is fixed, thus carbon has four, nitrogen five, oxygen six, helium two, neon eight, etc., until we find as many as eighty-six negative electrons for niton and radium. A system of the chemical elements, a parallel to the periodic system of the older chemists, has been elaborated, based upon this arrangement of the electrons. The conception of the atom, according to the Langmuir theory, is that of a sphere, and the electrons have the tendency to arrange themselves within this sphere in the most stable form, that is, a cube, the four corners of which are represented by the negative electrons, with the positive nucleus in the centre. In some cases, however, the positive nucleus may be outside this cube, as is the case in the water molecule. This cube is termed an octet. Professor Smithells, by the aid of his numerous models, proceeded to demonstrate the linking of atoms to form molecules. All chemical reactivity is based on this impulse of the electrons to form one or more octets. Thus, lithium with one electron combines with fluorine, which possesses seven electrons, to form a compound having eight electrons. The extreme stability of the nitrogen molecule, which consists of three atoms, receives a striking explanation when the linking of the individual electrons of each atom is shown by the models. The inherent force of the atoms to counterbalance loss of electric charge is the basis of chemical reaction, and in illustration the lecturer dwelt at length on the formation of carbon monoxide and of carbon dioxide, in the course of which he discussed very fully the reasons why no reaction takes place between carbon monoxide and oxygen in the cold, whereas the addition of the second oxygen atom is readily effected in the presence of heat. The Langmuir theory explains many chemical phenomena, the nature of which has hitherto remained obscure, and its further study promises to prove of far-reaching effect on our conceptions of chemical action. A vote of thanks was proposed by Sir William Bragg, and seconded by Professor Lowrie.

At the meeting held in Burlington House on February 2, Professor Armstrong in the chair, five papers were read. *The Action of Light on Silver Bromide* formed the subject of a communication presented by Mr. E. J. Hartung, who described his investigations, carried out in the University of Melbourne, with a microbalance, whereby amounts of a 10,000th of a milligram were weighed, although the instrument was capable of recording even smaller amounts. Thin sheets of vitreous silicate were coated with silver bromide, or these sheets were silvered and then exposed to the action of bromine. The films of silver bromide thus obtained were then exposed to light for varying periods, and the differences in weight before and after exposure were ascertained, a process which demanded the greatest precautions owing to the extreme difficulty in handling the material. It was found that even the rubber and the grease present in the apparatus influenced the results, owing to the formation of salts. A film of 5 square centimetres weighed approxi-

mately 0.5 milligram. It was found that no change in weight occurred in the silver bromide film in the dark, and also that freshly prepared films were more sensitive to light. After exposure to the sun for two hours the loss in weight of the halogen present amounted to about 2.5 per cent. Only in films of silver bromide exposed to the light did a residue occur which was found to be insoluble in sodium hyposulphite solution. On exposure to light in a vacuum the film lost rapidly in weight, the loss amounting to from 80 to 86 per cent. after exposure to light for six days. The results of the author's experiments show that neither oxygen nor water are necessary for the action of light on silver bromide. Ozone was found to exert a distinct action on silver bromide; on exposing a film in the dark to the action of ozone for a period of twenty hours a loss in weight amounting to 2 per cent. was recorded. It was further found that the presence of ozone accelerates the decomposing action of light on silver bromide, and that ozone exerts an action similar to that of light on this compound.

Dr. C. K. Ingold presented, in a condensed form, three papers: *The Structure of the Benzene Nucleus. Part I. Intra-nuclear Tautomerism; The Structure of the Benzene Nucleus. Part II. Synthetic Formation of the Bridged Modification; The Structure of the Benzene Nucleus. Part III. The Suppression of Intra-nuclear Change* (the latter in collaboration with Mr. H. A. Piggott). The author prefaced the substance of his paper, which was illustrated by numerous slides of the various formulas adduced in evidence of his views, by stating that to explain properly the phenomena of organic chemistry it was necessary to know the exact constitution of the benzene ring, and the further necessity of bringing down aromatic combinations, as hitherto accepted, to aliphatic conditions. He then dealt with a number of compounds which cannot be explained by the Armstrong-Bayer formula for benzene, and referred to the benzene-quinone changes and the keto-enol transformations in various substances. He then described a series of experiments undertaken to obtain bridged compounds, which led to the formation of a substance which should have been, but was not, orcinol. He succeeded in obtaining two tautomeric forms of 6-nitro- $\alpha$ -hydriindone, two distinct forms, each providing the starting-point of a distinct series of compounds, thus forming two families, a proof of the diversity of distinct tautomeric forms of a compound. In his paper, *Platinum Catalyst for Automatic Gas-lighters*, Mr. L. D. Williams discussed the composition of the gas-lighters produced in Germany prior to the war, which were found to contain, in addition to other substances, 28 per cent. of platinum, a figure which is apparently of importance as representing the exact percentage which should be present to ensure their effectiveness. Various experiments were carried out with different combinations, whereby it was found that these buttons rapidly lose their activity, due to changes in the button which influence the catalytic action of the platinum.

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## Retail Pharmacists' Union

**Leicester.**—The Leicester and Leicestershire Branch of the Retail Pharmacists' Union met on February 1, Mr. Goodess in the chair. Mr. J. Keall, chairman of the R.P.U. Executive, was unable to come as arranged, but his place was taken by Mr. G. A. Mallinson, secretary of the R.P.U., who spoke on *The First Year's Work of the R.P.U.* Mr. Mallinson's lecture comprised a number of instances of the way in which the R.P.U. had helped, and was continuing to assist, the retail pharmacist.

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**WHO PAYS FOR THE REPARATIONS?**—The Italian Ministers of Finance and of War have decreed that the chemical products, received as reparations from Germany, shall be distributed by the Central Military Pharmacy in Turin. These products are to be supplied first to public health institutes, payment to be made prior to delivery. The chemicals have been held back for nearly two years by the Italian authorities, and their release is likely to influence prices in the drug market.



## Festivities

### Harkness, Beaumont's Dance

THE staff of Harkness, Beaumont & Co., manufacturing chemists, Junction Bridge, Leith, held their annual dance in Smith's Rooms, Duke Street, Leith, on February 3. The company, who consisted of members and friends, numbering about 100, spent a pleasant evening. The duties of M.C. were carried out by Messrs. Urquhart, Gourlay, and Kerr.

### Fairy Dyes Dinner

THE directors of Fairy Dyes, Ltd., entertained a number of business friends and associates to dinner in Ferguson & Forrester's Restaurant, Edinburgh, on January 31, and later to a theatre party. Mr. F. Shoesmith, managing director, replied to the toast of Fairy Dyes, Ltd., and traced the history of the company from its small beginnings of a few years ago to its present position, with an international distribution and world-wide sale. The company recently purchased larger central premises in Glasgow to cope with the demand for Fairy Dyes.

### West Kent Pharmacists' Whist-drive

A MERRY party of whist players assembled at St. Mary's Hall, Bromley (Kent), on February 1, for the drive organised by the West Kent Pharmacists' Association. The number of players was ninety-nine. The arrangements were made by Mrs. Francis and Mrs. Davenport. At the interval there was a guessing competition for a cake. The M.C. was Mr. Dannatt, of Orpington, and the prizes—gifts from Messrs. Maw's, Sanger's, Yardley's, and Wright, Layman & Umney—were presented by Mrs. H. St. D. Francis (wife of the President of the Association).

### Whist-drive at Manchester

THE Manchester Pharmaceutical Association made a fresh record at the annual whist-drive on February 1, when 117 guests assembled. The President (Mr. T. E. Eastwood), with Mrs. Eastwood, received the guests on their arrival. After whist the prizes were distributed by Mrs. Eastwood to the following: *Ladies*—Mrs. Redford, Mrs. Hetherwick, and Mrs. Harrison; *Gentlemen*—Mr. Chapman, Dr. Craig, and Mr. Spedding. A musical programme followed, rendered by Mrs. Redford, Mr. Chapman, and Mr. Stephens, and Miss Franklin was the accompanist. At the conclusion the President thanked the hon. secretary, Mr. T. Miller, and the artists, and Mr. Nidd proposed that a hearty vote of thanks be accorded to the donors of the handsome prizes.

### Whist-drive and Dance at Aberdeen

THE annual whist-drive and dance of the Aberdeen Pharmacists' Golf Club was held in the Douglas Hotel on January 25, when a company numbering sixty-two spent an enjoyable evening. Whist was played from 7.30 to 9.30 p.m., when the company, under the chairmanship of the captain, Mr. W. G. Mitchell, sat down to supper. After supper the whist prizes and prizes won in the various competitions of the Club were presented by Mrs. Mitchell. The winners at whist were: *Ladies*—(1) Miss A. McCulloch; (2) Mrs. Geo. Stephen (Huntly). *Gentlemen*—(1) Bailie W. S. Taylor (Inverurie); (2) Mr. J. R. Reith (Cults). Ness Cup: Winner, Mr. H. M. Dugan; runner-up, Mr. Jas. Farquhar. Paterson Cup: Winner, Mr. C. A. Michie; runner-up, Mr. John Forsyth. Foursomes Competition (prizes by Mr. A. C. Bonner): Winners, Messrs. J. G. Mutch and J. Massie; runners-up, Messrs. W. Reid and W. Murison. Drummond Competition: Winner, Mr. W. F. Hay; runner-up, Mr. H. M. Dugan; semi-finalists, Messrs. A. G. Beattie and A. J. Ironside. Captain's Prize: Winner, Mr. R. Shand; runner-up, Mr. D. Ross. Ladies' Competition: Winner, Miss McConnachie; runner-up, Miss McCulloch. Banchoy Competition (prizes by Mr. A. B. McLaren, Glasgow): (1) Mr. J. G. Mutch; (2) Mr. W. G. Mitchell; (3) Mr. M. G. Duncan. Aboyne Competition: (1) Messrs. A. C. Bonner and D. Ross; (2) Messrs. J. R. Reith and M. Ross. Stonehaven Competition: (1) Mr. W. G.

Mitchell; (2) Mr. Jas. Farquhar; (3) Mr. U. Nicolson. After presentation of prizes and votes of thanks to the Captain and Mrs. Mitchell, proposed by Bailie Taylor and Mr. W. F. Hay, dancing was continued until the "wee sma' oor ayont the twal."

### Bath Chemists' Social Evening

THE annual whist-drive of the Bath Pharmaceutical Association and Pharmacy Club was held on February 2, when friends and students from the Bath and West of England College of Chemistry and Pharmacy were also included in the gathering. Mr. D. J. Williams (principal of the College of Pharmacy and President of the Association) was assisted in the arrangement by the following committee: Messrs. H. C. Broad (Vice-President), J. C. Cooper (treasurer), W. Mallaband, R. H. Moore, and L. Wilson, together with Messrs. P. J. Thompson and W. J. Hallett (hon. secretaries). After making an introductory speech Mr. Williams was asked to open a little parcel which was handed to him, addressed "To the most popular person in the room." The contents proved to be a buttonhole of violets and lilies of the valley for himself, "With compliments from Mr. and Mrs. Cooling." The following were the prize-winners: *Ladies*, (1) Mrs. F. R. Clark; (2) Miss G. Broad; (3) Mrs. Marsh, Consolation. Mrs. Collett. Special "Put-and-Take" prize (given by Mrs. W. J. Hallett), Mrs. Cooling. *Gentlemen*, (1) Mr. S. F. Thompson; (2) Mr. L. Broad; (3) Mr. Luther Wilson, Consolation, Mr. P. J. Thompson. "Put-and-Take" prize (given by Mrs. W. J. Hallett), Mr. Marsh. Consolation prizes were also given by Mr. Hallett, jun., for the students of the College of Pharmacy, and Miss Q. Jenkins won the ladies' prize and Mr. Dowling the gentlemen's. The prizes were presented by Mrs. W. J. Hallett.

### Chemists' Dinner at Lincoln

THE annual dinner of the Lincoln Chemists' Association was held recently at the Monsons Arms Hotel, Mr. Wark (President) in the chair. Mr. Watson proposed the "Retail Pharmacists' Union and the Pharmaceutical Society," and Mr. Ridyard replied. The phrasing of the toast, he said, carried him back two or three years, to a time when there was an outcry for the setting up of a trade body independent of, and unfettered by, the Council of the Society in any way. In an election address at that time, when he was an unsuccessful candidate for the Council election, he had advocated the advisability of preserving as close a union as possible between the new body to be set up and the Pharmaceutical Society. The existence of the Retail Pharmacists' Union was fully justified. It was justified because it seemed to him that, while the interests of the Society on the one hand and the Union on the other had in no way been impaired by the change of functions consequent upon the separation, each had found greater scope, from the greater freedom which resulted, for the exercise of their different functions. He believed the reason of this success was to be found in the close and cordial relationship between the two bodies. With regard to National Health Insurance remuneration, as one of the oldest members of the Local Associations Executive he could say that at no time had matters been more difficult, nor had they ever required more skilful handling than at the present moment. For the first time chemists are threatened with a reduction, whereas up to now they have always been able to come forward with some prospect of an increase. But although he was at the moment unable to make any definite statement, for reasons which they would appreciate, he was in a position to say that the R.P.U. would not recommend the acceptance of any terms which, in the opinion of the Union, would be unjust or unacceptable to panel chemists. Messrs. Rose, Saunders, and Ridel, together with Mrs. Giles, who presided at the piano, gave an enjoyable musical programme.

"LARNIN'" HIM.—The owner of a pharmacy in a small town in Austria, who was in the habit of absenting himself, often for days at a time, leaving the pharmacy in charge of an apprentice, has been compelled by the Board of Health to keep an assistant.



## The Calcium Carbide Decision

*The following is the text of the Referee's preliminary decision, given on February 6, in regard to the complaint that calcium carbide has been improperly excluded by the Board of Trade from the list of dutiable articles under the Safeguarding of Industries Act. The case was fully reported in our issues of December 24, 1921 (p. 59), January 21, 1922 (p. 61), and January 28 (p. 68).*

MR. CYRIL ATKINSON, K.C., the Referee, said: It is understood that what I am going to say is not my formal award, and any rights that anybody has under Section 19 of the Arbitration Act remain. In this case the complainants contend that calcium carbide has been improperly excluded from the list of dutiable articles under the Safeguarding of Industries Act. It is said that it should have been included as a synthetic organic chemical. The question for me is whether calcium carbide is or is not a synthetic organic chemical within the meaning of the Act. I think I must hold, first, that all articles not dutiable under other Acts of Parliament are *prima facie* entitled to be imported into this country free of duty; second, that no article should be included in the list of dutiable articles under this Act unless it is reasonably certain that it is covered by the words used in the Schedule. If there is any reasonable doubt, the substance ought to be excluded. Third, that the burden of proof is on the complainants. To succeed, therefore, the complainants must prove that beyond reasonable doubt calcium carbide is a synthetic organic chemical within the meaning of the Act. The complainants contend that the words "synthetic organic chemical" have a technical meaning, and that they must be given that technical meaning. They rely on the ruling laid down in Maxwell that phrases in technical legislation are used in their technical meaning, if they have acquired one, otherwise in their ordinary meaning. The opponents contend that the words must be construed in their ordinary commercial meaning. In my opinion the ruling quoted from Maxwell should be applied to the present case. If the words "synthetic organic chemical" have acquired a definite technical meaning, it is my duty to give them that meaning. If not, it is my duty to find out their ordinary meaning, if they have one. If they have not a definite meaning, technical or ordinary, definable in such language as would yield a reasonably definite test for the determination of the question, the only remaining way appears to be to ask, "Is calcium carbide regarded as a synthetic organic chemical by the general body of persons having the technical knowledge necessary to enable them to form an opinion?" Now, have the words "synthetic organic chemical" or even "organic chemical" acquired a definite technical meaning? Is there any single scientific definition of an organic chemical generally accepted by scientific persons or a large majority of them?

### FIVE DEFINITIONS

Five definitions have been advanced, four of them by the complainants, but Mr. Ballantyne said the academic definition was "compounds of carbon" with certain exceptions. He used the curious expression that this was the best so far produced, and he also said that it ought to be excluded as the decisive test. He referred to the definition "hydrocarbons and their derivatives" as a proposed definition. Professor Perkin was very emphatic that the expression meant "compounds of carbon" without any exception at all, and that this definition should be rigidly applied. Professor Morgan asked if we had not thrown over this definition some days ago. His view was that the true definition ought to be "hydrocarbons and their derivatives." Mr. Hewitt had been taught by Sir Edward Frankland that an organic chemical was one in which an atom of carbon combined with hydrogen, nitrogen, or another carbon atom, but said that he himself thought that "hydrocarbons and their derivatives" was probably the best definition. Mr. Rogers thought that "compounds of carbon which contain an organic radicle" was the true way of putting it. There are thus three, if not four,

different views as to the technical meaning of "organic chemical" to be found in the evidence of the complainants. The same diversity of view is found in the text-books. For example, in Richter and Perkin and Kipping one finds the academic definition "compounds of carbon" laid down and rigidly adhered to. In Meyer and Jacobson and in Newth and many others the definition given is "compounds of carbon" with certain exceptions. In Schorlemmer's "Rise and Development of Organic Chemistry" there is an interesting account of the different views held with respect to the precise meaning of an "organic chemical," but the discussion ends with the writer saying that "We define, therefore, that part of our science which is commonly called organic chemistry as the chemistry of hydrocarbons and their derivatives." The writer adds that even this definition does not place a sharp boundary line between organic and inorganic chemistry. Without referring in detail to other text-books, I think it is fairly summarising the position to say that the evidence of the witnesses and of the text-books referred to during the hearing show that there is not a technical meaning of the words "organic chemical" which has been generally accepted by chemists. I am satisfied that the following statement from Bassett is well founded: "There are quite a number of carbon compounds which it is difficult to classify logically as either organic or inorganic." I believe it is this difficulty and the differing opinions held as to the compounds referred to which have prevented the general acceptance of any reasonably precise definition. As to the ordinary commercial interpretation of the term "organic chemical," no satisfactory evidence has been tendered. I have, therefore, to take the last alternative test and ask whether it has been proved that calcium carbide is, or has been regarded as, a synthetic organic chemical by the general body of chemists, that is, by the general body of persons having the technical knowledge necessary to enable them to form an opinion. Even if I accepted the definition most generally given—viz., "compounds of carbon, with some exceptions," I should still be faced with the same question.

### THREE KINDS OF EVIDENCE

The available evidence is of three kinds. There is the evidence of the witnesses called; there is the evidence of the text-books; and there is the evidence derived from other literature. As to the witnesses; on the one side I have five able men, well qualified to speak, who say that they regard calcium carbide as an organic chemical. On the other hand, I have five equally able men who say just the opposite. Of the five witnesses called by the complainants, four of them approached the question from the definition point of view. They say: "That is my definition, and therefore I say that calcium carbide is an organic chemical." Mr. Ballantyne clearly did not think that this was the right way in which to approach the question. His reason for saying that calcium carbide is an organic chemical was its stability under workaday conditions, its characteristic behaviour, the fact that carbon is the characteristic part of the molecule. I do not know that the fact that the witnesses have different reasons for their convictions is very material, and I am quite satisfied that the evidence of these five witnesses establishes the fact that a large body of scientific opinion regards calcium carbide as an organic chemical. But the evidence on the other side is equally convincing, and establishes the fact that there is also a large body of expert opinion which does not regard calcium carbide as an organic chemical. The same result is arrived at from an examination of the text-books. The text-book test ought to be the test most in favour of the complainants, for one would naturally expect text-book writers to lean towards the academic point of view. The strongest statement in favour of the complainants is found in Richter, who says in terms that calcium carbide is organic, but he also says that carbon dioxide and carbon monoxide are organic, whereas it is conceded that they are not so regarded. He simply takes the academic definition and rigidly adheres to it. Perkin and Kipping adopt the same rigid rule, but, although they adopt the academic definition, it is noticeable that calcium carbide is dealt with in the



inorganic volume, and that in the organic volume it is mentioned but once, and that in reference to the way in which acetylene is produced, and that while silver acetylide, copper acetylide, and potassium acetylide are referred to, there is no mention of calcium acetylide. On the other hand, in Meyer and Jacobson it is stated that organic chemistry embraces all compounds of carbon except the simplest—viz., carbon dioxide, carbon monoxide and its salts, and certain compounds which arise at very high temperature—viz., the carbides, which are usually dealt with in the inorganic branch on the ground of suitability. There was some dispute as to the correct translation of the last word, but I see no reason for not accepting Dr. Forster's evidence. Another writer, Newth, said in terms that calcium carbide is regarded as belonging to the organic division. Moissan, in his book on inorganic chemistry, published in 1904, says: "Organic compounds are not studied in this treatise. You will not find here any other combination of carbon except metallic carbides, carbonates, cyanides, cyanates, etc." Von Groth gives carbides as one of the groups of inorganic compounds. Moissan, in his book on the electric furnace, treats the products therein discussed, which include calcium carbide, as inorganic chemicals.

#### TEXT-BOOK TESTIMONY

It is conceded that 90 per cent. of the text-book writers include, or deal with, calcium carbide in the inorganic branch. It is said that this is done merely for the sake of convenience. Why should it be more convenient to deal with calcium carbide as a compound of calcium rather than as a derivative of acetylene unless it is that the writers know that their readers will naturally look in the inorganic section for information about it? It is inconceivable, to my mind, that there should be the vast majority of writers treating calcium carbide as if it were an inorganic chemical, and that it should never occur to one of them to say, "You must not be misled by my treating calcium carbide as inorganic; it is only done for convenience; it is really organic." The more I think of it, and I have thought of it a good deal, the more weight do I find myself giving to the text-book evidence. I repeat that I cannot believe writers would almost universally be discussing and treating calcium carbide as if it were inorganic unless they regarded it as inorganic, or probably as inorganic. In addition to the evidence from text-books there are the Patent Office publications and the Swiss and Italian Tariffs, and, for what it is worth, the view taken in the United States by the Treasury Department, and there is the classification in the "Chemists' Year-Book." In my opinion the classification in this book is very significant. With regard to the question as to generally accepted views, it is unnecessary to go into further detail. I think I have said enough to indicate the basis of my opinion, which is that it has not been proved that calcium carbide is generally regarded as a synthetic organic chemical by the majority of chemists. It is quite clearly established that a large body of technical opinion takes the opposite view. I have not dealt with the term "synthetic," but it is useful to point out that there does not seem to be unanimity as to the meaning even of that word. Sir Arthur Colefax, in his reply, laid great stress on the fact that the structure of calcium carbide was generally regarded as that of acetylene, and that, therefore, it must be an organic chemical within the hydrocarbon definition. It seems to me that the force of that argument rests upon the acceptance of the definition, but that definition cannot be put higher than that it is a suggested definition, and the author of it warns us that even this definition does not fix a sharp boundary line between organic and inorganic chemistry. At any rate, that argument has not carried with it the general body of expert opinion, and I have come to the conclusion that it is not possible for me to say that I am satisfied that calcium carbide has been improperly excluded from the list; indeed, I think it has been properly excluded, and therefore the complaint fails. [A date is to be fixed later for a discussion of points of law arising out of the above if thought necessary by the complainants.]

## Poisonings

THE following cases of fatal poisoning, among others, have been recorded since our last report:

At Grimsby, Edward Casey, a ship's steward, died from accidentally drinking a mixture of egg and strong acetic acid, believing the latter ingredient to be vinegar.

An inquest was held at Southport, on February 3, on the body of Mr. Robert Henry West, chemist and druggist, 25 York Road, Birkdale, who, the evidence showed, died from hydrocyanic-acid poisoning on February 1. It appeared that Mr. West had lately had an attack of influenza, and that he was very busy on account of the amount of illness prevailing. Mr. W. S. Mawdsley, solicitor, who appeared for the family, elicited that there was no financial embarrassment, and that at times the deceased had suffered from loss of self-control. A medical witness stated that Mr. West was subject to fits of depression. Mr. Samuel Ratcliffe, chemist and druggist, said that he was an assistant to Mr. West. On the evening of February 1, his employer came into the dispensary from the house without speaking, returned almost immediately, and collapsed. Witness found in the sink two empty 1-oz. bottles labelled "Acid. Hydrocyanic.—Poison." The acid was kept in a small cupboard behind the counter. Mr. West was sober, and witness had not noticed any change in his manner during the day. The deputy-coroner recorded a verdict of "Suicide while of unsound mind," and expressed sympathy with the widow and family.

The trial of Ernest E. Black on a charge of murdering his wife by administering arsenic (*C. & D.*, February 4, p. 44) was concluded at the Cornwall Assizes on February 2. The first expert witness was Mr. John Webster, F.I.C., senior analyst to the Home Office, who said that in the fluid in one of the bottles he examined was a trace of arsenic, but it was so small that it would not affect the human system at all; to give a fatal dose from medicine containing that proportion of arsenic would require 1,300 bottles. In cross-examination, Mr. Webster admitted that there were traces of arsenic at times in food, but said he could not agree that arsenic, if taken, would remain in the body indefinitely. It was got rid of very quickly. Arsenic would remain in the hair and nails for a long period, but after a comparatively short time it would not be detected in the organs. Early in the afternoon Mr. Webster, at the request of the judge, following a suggestion by the jury, undertook to make three cups of tea, one with 2 gr. of arsenic in it, one with 1 gr., and one with none. It was announced later, however, that no arsenic was to be had in Bodmin, and Mr. Webster was asked to go in a motor-car to Wadebridge for some, the judge observing that arsenic seemed more difficult to obtain now. Before the jury retired Mr. Webster returned with the arsenic. It was placed in the cups of tea in the proportions directed and handed to the judge and jury for their inspection. Sir William Willcox, M.D., giving evidence as to the symptoms observed in the deceased's illness, said that in his opinion the cause of death in this case was arsenical poisoning. The Judge: What actually kills?—Sir William: It is sometimes thought that arsenic kills only by exhaustion, but that is not so. It kills by exhaustion, but also because it is a poison. The Judge: Is there any time in which you either die or recover from the taking of arsenic?—That is rather a difficult question to answer. Usually when a big dose is taken death occurs in three days, but in some cases the arsenic damages the organs of the body, and a late death may occur several days after the taking of the last dose. I have known cases in which some months have ensued before death has occurred. In cross-examination by Mr. Pratt, Sir William said that he was of opinion that no arsenic had been administered to Mrs. Black within five days of her death. Mrs. Black did not die from the direct effects of arsenical poisoning. Mr. Pratt: If Mrs. Black had died from gastritis the post-mortem examination would have given the same negative result as it gave in this case, would it not?—Yes, but gastritis would not have lasted so long. Black was eventually found "Guilty," and was sentenced to death.



## British Industries Fair

IN the British Industries Fair, which will be held concurrently in London and Birmingham from February 27 to March 10, British manufacturers will find one of the most potent factors available for strengthening and extending their export trade. The Fair has been held without a break since its inception in 1915, when, at its conclusion, the exhibitors made a unanimous request that it should be made a yearly institution. Over a quarter of a million invitations are being sent out to buyers in this country, and 48,000 are being dispatched to buyers overseas. Of the latter, 15,000 were sent out at an early date in the more distant parts of the world. These 48,000 overseas buyers whose names are on the Department's index have also been the recipients of a carefully planned series of "follow up" letters, which have included illustrated booklets, calendars, posters, and blotters.

### CHEMICAL TRADES

This is an entirely new section at the Fair, and no efforts have been spared to make it thoroughly representative of all branches of the chemical and allied trades. So successful have these efforts been that visitors to the Fair will have the opportunity of inspecting the largest and most comprehensive display ever shown

VISIT THE  
BRITISH  
INDUSTRIES  
FAIR 1922  
FEB 27 - MCH 10



### ADVERTISING THE FAIR

of the products of the United Kingdom chemical industry. At previous London fairs only drugs and druggists' sundries were exhibited, but in the forthcoming exhibition, to be held in February 1922, the scope has been extended to include all chemicals, as such, and domestic chemical products.

The overseas buyer will at once perceive that his requirements in chemical and allied products have been well catered for. Arriving at the Shepherd's Bush entrance to the Fair, he will immediately find himself inside a spacious hall—the Chemical Hall—literally packed with chemical products of every description, from the rarest of fine chemicals for research or medicinal purposes to those products known commercially as "heavy," and sold by the truck or cargo-load. This extensive range of products is not, however, arranged haphazardly. Products of the same class are, as far as possible, exhibited in adjacent stands. The overseas buyer who is mainly interested, for example, in dyes, will be able to inspect all the dye exhibits on contiguous stands.

Immediately inside the Shepherd's Bush entrance the visitor will find heavy chemical products, followed successively by coal-tar dyes and intermediates, fine chemicals, medicines, and domestic chemical products.

The following large branches of the chemical industry may be specially mentioned:

1. Heavy chemicals, embracing the alkali industry, disinfectants, fertilisers, insecticides, tar and ammonia products, etc. Some of the firms exhibiting these products are:

Acme Chemical Co., Ltd.  
Albright & Wilson, Ltd.  
Boake, Roberts & Co., Ltd.  
Bowdler & Bickerdike.  
British Cyanides Co., Ltd.  
Burt, Boulton & Haywood, Ltd.

Collett, J. M., & Co., Ltd.  
Dennis, H. H., & Co., Ltd.  
Gas Light and Coke Co.  
Keeling's Oxides, Ltd.  
Laporte, B., Ltd.  
Marley Hill Chemical Co., Ltd.

Midland Tar Distillers, Ltd.  
Orr's Zinc White, Ltd.  
St. Helens Smelting Co.  
South Metropolitan Gas Co.

United Alkali Co., Ltd.  
Wilkinson, J. B.  
Wilson Bros. Bobbin Co., Ltd.

2. Dyes and intermediates. Some of the firms exhibiting these products are:

Ajax Aniline Dye Manufacturing Co., Ltd.  
Alliance Colour and Chemical Co., Ltd.  
British Alizarine Co., Ltd.  
British Dyestuffs Corporation, Ltd.  
Graesser-Monsanto Chemical Works, Ltd.  
Gray's Dyes and Colours, Ltd.

Holliday, L. B., & Co., Ltd.  
Leitch, J. W., & Co., Ltd.  
North British Chemical Co. (England), Ltd.  
Oxley's Dyes and Chemicals, Ltd.  
Robinson, James, & Co., Ltd.  
Scottish Dyes, Ltd.  
Sharp, J. B. & W. R., Ltd.  
Southdown Chemical Co.  
Williams Bros. & Co.

3. Fine chemicals, embracing analytical and research chemicals, pharmaceutical chemicals and drugs, photographic chemicals, etc. Some of the firms exhibiting these products are:

Allen, Fredk., & Sons (Poplar), Ltd.  
Allen, Stafford, & Sons, Ltd.  
Boots Pure Drug Co., Ltd.  
British Drug Houses, Ltd.  
Burrighs Wellcome & Co.  
Bush, W. J., & Co., Ltd.  
Evans Sons Lescher & Webb, Ltd.  
Hopkin & Williams, Ltd.

Howards & Sons, Ltd.  
Johnson & Sons (Manufacturing Chemists), Ltd.  
Macfarlan, J. F., & Co.  
May & Baker, Ltd.  
Morson, Thos., & Son, Ltd.  
Pierson, Morell & Co., Ltd.  
Rose, J. L.  
Tyrer, Thos., & Co., Ltd.  
Whiffen & Sons, Ltd.

4. Domestic chemical products, embracing cleansing preparations, laundry materials (starch, blue, bleaches, etc.), medicines, polishes, soaps, toilet preparations, and general druggists' sundries, etc. Some of the firms exhibiting these products are:

Cussons, Sons & Co., Ltd.  
Dales, J. T.  
Dubarry & Co.  
Harker, Staggs & Morgan, Ltd.  
Ingram, J. G., & Son, Ltd.  
Kiwi Polish Co. Pty., Ltd.  
Knight, John, & Sons, Ltd.  
Lovell, H. S., & Co.

Nugget Boot Polish Co.  
Peace Pillow Co.  
Redio Co., Ltd.  
Sanagen Co., Ltd.  
Sorbo Rubber Sponge Products, Ltd.  
Stokes, Wm., Ltd.  
Toogood, Wm., Ltd.  
Watson, J., & Co., Ltd.

## New Books

*Pharmacopæia of St. Bartholomew's Hospital.* Edited by J. Langford Moore, F.C.S. 5½ in. × 3¼ in. Pp. 100 and diet-table, interleaved. Spottiswoode, Ballantyne & Co., Ltd., New Street Square, London, E.C. 4. [A new edition of the hospital pharmacopæia, the issue of which was delayed by the war. The formulæ in general use, arranged alphabetically, are followed by the formulæ employed in the children's, ophthalmic, aural, throat and nose, skin, and dental departments. Other matters dealt with are treatment in cases of poisoning, dose-scales, dose-table (in both Imperial and metric measures), and a list of B.P. preparations.]

*Willing's Press Guide, 1922.* 8½ in. by 5½ in. Pp. xiv., 505. 2s. 6d. James Willing, Ltd., 30 King Street, Covent Garden, London, W.C. 2. [This, the forty-ninth annual issue of "Willing's Press Guide," follows closely the plan of previous volumes—a plan shown by experience to be convenient for quick reference. The section devoted to existing periodical publications of the seventeenth and eighteenth centuries is an example of the comprehensive scope of the book, which, as is pointed out in the preface, might have been further (and unduly) expanded by the inclusion of a large number of parish magazines and American journals of little or no interest. The Guide has been kept within reasonable limits, and admirably fulfils its purpose.]



## Railway Rates Advisory Committee

THE Railway Rates Advisory Committee, which has been sitting for some months, is entering upon the final determination of the general principles ruling the railway classification of goods by merchandise trains, which was published at the end of 1920, met at the Royal Courts of Justice on February 7 to consider the objections which had been lodged in regard to Group 9, relating to chemicals.

The Committee consisted of Sir Francis Gore-Brown (chairman), Sir W. Berry, Mr. Lockett, and Mr. Jepson.

After some remarks from Mr. Dennison, representing the Federation of British Industries, Mr. Pike, for the railway companies, handed in a list of amendments in provisional classification offered by the railway companies to traders, and accepted by them. Mr. Pike said the objections so far as carbonate of ammonia were concerned had disappeared.

### RATES FOR COPPER SULPHATE

Mr. Fern (representing the Association of British Chemical Manufacturers) said the Association objected to Class 13 for the home trade, but they wished to make a claim for lower rates for export. About 90 to 95 per cent. of the copper sulphate in this country was manufactured for export. In 1914 the exports were 68,000 tons, in 1915 it was 65,000 tons, but owing to the war it dropped considerably, and for 1921 it was only 28,000 tons. Continental competition, and particularly German competition, was very keen. When this was exported it went in large quantities of anything from 10 to 200 tons. They thought this was a case where the railway companies could have met them and given them a lower classification for large quantities.

After Mr. Pike had spoken on the question, the chairman announced the decision of the Committee, which was that the export rate would be maintained in Class 10.

Mr. Fern then dealt with the question of brine, and the chairman said the decision of the Committee was that brine should be in Class 2.

### NITRE-CAKE

Mr. J. H. Fitton, transport manager of the British Dyestuffs Corporation, Ltd., said the objection he had to support was in regard to nitre-cake. To-day the price obtainable for this was less than the cost of carriage. During the war when it was used for munitions there was a brisk demand for it, and the price went up to 25s. and 30s. a ton, delivered at the buyer's works, but to-day it was a residue which they had difficulty in disposing of at any price at all. The conditions to-day were the same as pre-war, when it was sold at 7s. 6d. to 8s. 6d. a ton delivered. For several years the railway companies declined to provide wagons for its delivery. They asked that the product be placed in Class 3.

Mr. Pike said the railway companies' experience had been that the destructive nature of the nitre-cake on the wagons had been so great that they very soon broke up, and even now when carried in owners' wagons special attention had to be paid to them by the wagon examiners or they would always be breaking down. Taking all the circumstances into consideration he thought Class 8 would be reasonable.

Mr. Fitton said that 90 per cent. of the article was carried in owners' wagons.

Mr. Pyke said that in the one particular week they had taken 45 per cent. of the consignments were 8 tons, and over 55 per cent. were smaller quantities.

The chairman said it would remain in Class A generally, but in Class 5 when in owners' wagons.

### "CHEMICALS NOT DANGEROUS"

Mr. Lukes (Association of British Chemical Manufacturers) dealt with the question of "Chemicals not dangerous." Manufacturers objected to the class proposed by the railway companies, and considered the proposals

unfair. They suggested that common chemicals should be put in the list on page 40 of the original proposals. With regard to the further proposals of the railway companies regarding castor-oil drums, cases, etc., the manufacturers suggested that Class 16 would be the one for casks, drums, cases, etc., and Class 14 in 2-ton lots. Their idea was that if generic classification was necessary, then casks and iron drums should be in the same class, and not a higher class as proposed by the railway companies. "Chemicals not dangerous" which could be packed in crates or hampers would be in the nature of drugs, and the manufacturers did not see any reason to duplicate the entry by putting in another one for chemicals. He also objected to the proposed classification of carboys. His company manufactured a non-dangerous chemical named hydrosulphide of soda that was labelled "Chemicals not dangerous," which had since been taken out and put into the lower classification.

The chairman asked if it would meet the case if the liquids of sp. gr. 1.2 were altered to 10 gallons.

Mr. Lukes thought that, generally speaking, they would agree.

### HAMPERS AND CASES

The representative of the London Drug Club said that the classification of cases, crates, and hampers was excessive, and the Club asked that these should be put in Class 18.

Mr. Pike said it was the same classification as to-day. Goods packed in hampers did not give them so good loading as goods packed in any other form.

Mr. Lukes said it had been arranged with the railway companies that hydrosulphide of soda should go in Class 16.

No one appeared in support of the objection in regard to salicylic acid, and the proposal that aspirin should be included under the head of "Chemicals not dangerous." That was, therefore, withdrawn.

Another proposal in regard to acid phosphate of ammonia was also not supported.

The chairman said the classification of the railway companies would stand.

### DISTILLED WATER

The representative of the London Drug Club asked that distilled water in carboys should be put in Class 13 the same as casks or cases. He referred to the very onerous conditions for the packing of carboys. He thought that distilled water when sent in this super-protected way should be put in a much lower class than Class 16. This was of exceedingly low value. The utmost value of distilled water was that used for medicinal purposes, and that was sold at 8s. per cwt.; that used for other purposes was of considerably less value. It was, of course, absolutely harmless. They used 10- to 12-gallon carboys for it.

The chairman said the decision of the Committee was that it must remain in the same class as before.

### HEALTH SALTS

Mr. Smith raised the point of fruit salts, which it was thought should be in Class 18, but the chairman reminded him that he would be giving evidence later in relation to drugs.

Mr. Davis spoke as to saline. He said he represented the following firms: Scott & Turner, Ltd., manufacturers of Andrews Liver Salts; Wilkinson & Simpson, Ltd., manufacturers of National Health Salts; Sutcliffe & Bingham, Ltd., manufacturers of Khovah Health Salts; and Newball & Mason, manufacturers of Seabreeze Health Salts. He said his application for a more favourable classification was based on the grounds that saline was not a drug; secondly, that as packed to a very large extent by the clients he represented it was easily-handled traffic. The quantity turned out was very great and was increasing. It was a comparatively new article and entitled to special classification on its own merits. Saline was put on the market about thirty years ago. The fourth objection was the commercial value of the article, which retailed at 7d. per small tin.



There was no drug used in the manufacture of effervescing health salts. One of the firms he represented paid the railway companies about £600 a week for carriage on saline alone. Effervescing health salts is a thing quite apart from drugs. It was proposed that Epsom salts should be in Class 16.

Mr. Pike saw no reason why saline should be differentiated from fruit salts. During a week the traffic for the whole of the railways in the kingdom consisted of nine consignments all under one ton, the average weight of a consignment being 10 cwt. of saline and fruit salts together.

Mr. Davies did not agree with those figures.

The chairman said that the classification as proposed by the railway companies would stand.

#### QUILLAIA BARK

The representative of Boake, Roberts & Co., Ltd., who was also representing the Association of British Chemical Manufacturers, said that the traffic for quillaia bark at the moment was in Class 1 if unground, and ground in Class 2. The railway companies sought to put a restriction on the traffic. They asked that the words "and brewing" should be put in.

Mr. Pike thought if used for brewing it should go in Class 80, which was the same class as hops.

Witness said this bark was required to make a chemical used in the brewing trade.

Mr. Pike said in the week he had mentioned they only had one consignment, and that was 30 cwt.

Witness declared they had not had a consignment less than one truckload, which was five tons. There was no question of them using quillaia bark in the same way as a druggist or herbalist used it. It was a bark used in the tan-yards. Sometimes it came through in the form of a liquid and sometimes as powder.

Mr. Pike said their chemist had advised him that this bark could not be used for tanning but only for medicine or for brewing, and they felt if that was so it was in quite a different category from barks used for industrial purposes.

The representative of the British Dye Works drew attention to mimosa bark used for tanning and classified Class C.

The chairman said they suggested the item of barks for tanning, dye, paper-making, and vegetable dye, with a minimum of four tons per truck, shall be Class 9. With regard to quillaia bark, they directed that a new item be added, quillaia bark Class 13.

The representative of the London Drug Club said that they felt that Class 18 was rather high for barks, herbs, and roots worth about £50 a ton, which were easily handled, coming in packed. They handled quillaia bark in much the same way.

The Chairman: Quillaia bark was in Class 1 before and other barks in Class 3.

Witness said the only bark which was carried in considerable quantities was cascara bark, which was dealt with in truckloads. They only asked that it should be put in Class 16.

The Committee decided that the railway companies' proposals must stand.

The Committee then adjourned.

## Birth

GALLOWAY.—At the Bungalow, Highfield Road, Yardley Wood, Birmingham, on January 31, the wife of G. S. Galloway, chemist and druggist, of a daughter.

## Marriage

FAIRHURST—BONNEY.—At St. Mary's Church, Lower Ince, on January 26, Albert Charles Fairhurst, chemist and druggist, St. Helens, to Annie A. Bonney, Wigan.

DURING 1921, 90,352,000 cr. of new capital was invested in the chemical industry of Czechoslovakia.

## Personalities

MR. L. CAMERON, Ph.C., Seaford, has been elected a member of the council of the local chamber of commerce.

A CERTIFICATE OF NATURALISATION has been granted to A. G. Hogstrom (Swede), 1 Albion Road, Edinburgh, chemist and druggist.

MR. R. DEMUTH, manufacturing chemist, 68 Salisbury Road, London, N.W. 6, who is at present in a nursing home, asks us to state that he is making progress towards recovery, and hopes soon to resume business.

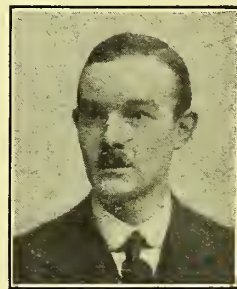
MR. VIVIAN C. HEWLETT, Ph.C., a director of C. J. Hewlett & Son, Ltd., manufacturing chemists, Charlotte Street and Curtain Road, London, E.C. 2, has been elected Renter Warden of the Worshipful Company of Fruiterers.

MR. JOHN PHILLIPS, chemist and druggist, late proprietor of Stamp's Pharmacy, Hampstead, London, N.W., lectured, on January 25, before the members of the Young Men's Institute, Blaenau Festiniog, on "The Foundations of Knowledge." The chair was occupied by Mr. Hugh Jones, chemist and druggist, F.S.M.C., President of the Institute.

At the annual installation meeting of the Royal Cumberland Lodge (No. 41), at the Masonic Hall, Bath, on February 2, Bro. F. R. Stent, chemist and druggist, Senior Warden, was installed Worshipful Master. The ceremony was performed by W. Bro. John Hawes, chemist and druggist, who was invested as I.P.M., and was presented with a P.M. jewel.

MR. DAVID A. EVANS, chemist and druggist (proprietor of Steele & Marsh, chemist, 6 Milsom Street, Bath), has been elected President of the Bath Chamber of Commerce for the third year in succession. Cordial speeches were made at the meeting of the Chamber at which the election took place in appreciation of the exceptional work done by Mr. Evans during his tenure of office. Mr. Evans has also become a member of the Bath Rotary Club. Speaking at the annual dinner of the Chamber of Commerce on February 2, Mr. Evans remarked that steps were being taken which in the near future would tend, if carried through, to bring the city to the highest eminence so as to deserve the position of one of the spas of Europe.

MR. ARTHUR J. HARRIS, the newly elected President of the Cardiff and District Pharmacists' Association, served his apprenticeship to Mr. John Walton, Broadstairs, being attracted to the drug-trade, he considers, by frequenting chemists' shops in his boyhood as a photographic customer. Of Mr. Walton's training he speaks in terms of high praise. Experience with the late Mr. Robt. Drane, the well-known chemist and antiquary in Queen Street, Cardiff, followed, and after a course of study at the London College of Pharmacy, where he won medals in botany and materia medica, Mr. Harris qualified in 1914. In the same year Mr. Drane died, and Mr. Harris subsequently became a director in the business, which was reconstituted as a limited company. During the war he saw active service in the R.A.M.C. Mr. Harris has put in a good deal of work for the Association over which he now presides, having been assistant-secretary, secretary, and Vice-President.



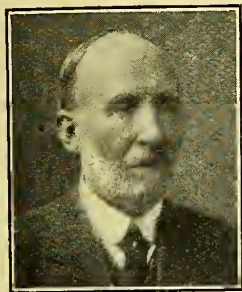
MR. A. J. HARRIS

AMONG the exhibits at the second annual Margate Exhibition, which was held from January 25 to February 4, was an attractive display by D. T. Evans, Ltd., chemists, High Street and branches, comprising lavender water, bath-salts, and soap.



## Deaths

**BALL.**—As briefly recorded in our issue of February 4 (p. 53), Mr. Arthur Wilson Ball, joint managing director



MR. A. W. BALL

of Oppenheimer, Son & Co., Ltd., manufacturing chemists, 179 Queen Victoria Street, London, E.C. 4, died at his residence in Tufnell Park Road, N. 7, on February 1, aged sixty. Mr. Ball was born at Edith Weston, and served his apprenticeship at Malton. He next enlarged his acquaintance with pharmacy by becoming an assistant successively with Tomlinson & Hayward, Lincoln; Mr. Albert Cooper, Ph.C., South Kensington; Mr. Kent, East Molesey; and Savory & Moore, London, W. After this, at the suggestion of his friend the late Mr. S. M. Burroughs, he joined the staff of Burroughs Wellcome & Co., and during his stay of several years gained a comprehensive experience both "in the house" and as a West End representative. In 1895, shortly after the death of Mr. Burroughs, Mr. Ball terminated his engagement and associated himself with the late Mr. William Oppenheimer as manager and director of Oppenheimer, Son & Co., Ltd. In this capacity he took sole charge and general management of the office. Upon the death of the late Mr. William Oppenheimer, Mr. Ball became joint managing director with Mr. T. Oliver Kent, F.R.S.A., F.C.S., and the business has been conjointly managed by the same directors up to the present time. Mr. Ball, who had been in failing health for some months past, was widely known; and his keen business ability, associated with an open-hearted disposition, created for him many friends throughout the trade, both in this country and on the Continent. The funeral took place at Islington Cemetery, Finchley, on February 4; it was attended by a large circle of relatives and personal friends, by the directors (Mr. T. Oliver Kent and Mr. C. E. Franklin Vallet), and by a large number of employees from the staff and works. Among the personal and business friends present were: Mr. A. W. Gerrard, Ph.C. (Cuxson, Gerrard & Co., Ltd.); Mr. Macadam, jun.; Mr. Dewar and Mr. Bailey (British Malt Products Co.). The hearse was covered with floral tributes. The loss of Mr. Ball will be keenly felt by all who were associated with him in business.

**BIRD.**—In London, on February 7, suddenly, Sir Alfred Bird, Bt., M.P., chairman of Alfred Bird & Sons, Ltd., manufacturing chemists, Deritend, Birmingham, aged seventy-two. Sir Alfred Bird was the son of Mr. Alfred Bird, F.C.S., analytical and manufacturing chemist, Worcester Road, Birmingham. He was educated at King Edward's Grammar School in his native city, and joined his father and brother in the business in 1873, retiring from active participation in the management in 1905. Since 1910 he had represented West Wolverhampton in Parliament. Sir Alfred, whose death was due to a street accident, was knighted a year ago, and received a baronetcy at the beginning of the present year.

**COOLING.**—At 9 Lansdowne Road, Manchester, on February 4, Mr. William John Cooling, retired chemist and druggist, aged seventy-five. Mr. Cooling served his apprenticeship at Boston to Mr. Thompson. He qualified in 1868, and took over the business of his late father in Newark, then being carried on by his mother. In 1897 Mr. Cooling left Newark and acquired a pharmacy in Higher Crumpsall. He remained there till 1919, when he sold the business to Taylors' Drug Co., Ltd.

**CONNOR.**—On February 4, Mr. W. H. Connor, third son of the late Dr. Samuel Connor, J.P., and brother of Mr. J. E. Connor, J.P., Ph.C., ex-President of the Pharmaceutical Society of Ireland. Mr. Connor assisted his

brother in the management of S. Connor & Sons, chemists, Hill Street, Newry; he was a Presbyterian and a Freemason, and was widely known and esteemed. He was unmarried.

**CURTIS.**—The funeral of the late Mr. George Curtis, chemist and druggist, 42 Quernmore Road, London, N. 4, whose death was announced in our issue of February 4 (p. 53), took place at New Southgate Cemetery on February 3. The North London Pharmaceutical Association was represented by the President (Mr. A. H. Jenkin) and the Vice-President (Mr. J. Downing), and a wreath was sent by the Committee of the Association.

**FRASER.**—Recently, Mr. Alexander Fraser, chemist and druggist, Renton, Dumbartonshire. Mr. Fraser served his apprenticeship with Dewar & Hay, Dingwall.

**KEENE.**—At his residence, Pasture Road, Leeds, on January 30, Mr. J. L. Keene, local representative of Hirst, Brooke & Hirst, Ltd., manufacturing chemists, Millgarth Mills. Mr. Keene served his apprenticeship in pharmacy at Sittingbourne, and subsequently joined the representative staff of Wright, Layman & Umney, Ltd., London, in whose interests he covered most of the United Kingdom. He eventually took up a similar appointment with Messrs. Hirst, Eeroke & Hirst; and one who knew him writes that in this sphere "his personality and character had made most of his business acquaintances into personal friends." The funeral service was held at St. Aidan's Church, Roundhay Road, in the presence of a representative gathering, including the President of the Leeds Chemists' Association (Mr. H. Gilleggan), the treasurer and several members of the Association, the departmental managers of Hirst, Brooke & Hirst, Ltd., and the clerk to the Leeds Insurance Committee (Mr. J. A. Atkinson).

**LLOYD.**—At 65 Empress Road, Lerby, recently, Frances, widow of the late Mr. Robert Lloyd, chemist and druggist, Clay Cross, aged eighty-four.

**PALMER.**—At Radcliffe Infirmary, Oxford, on January 29, following an operation, Mr. James Palmer, chemist and druggist, 9 North Parade Avenue, aged sixty-one. Mr. Palmer acquired several years ago the business of the late Mr. Henry Thurland, Woodstock Road; after carrying it on for ten years he removed to North Parade Avenue. He was a prominent member of the Alfred Lodge of Freemasons.

**PROCTOR.**—At Heathcote, Higher Bank Road, Fulwood, Preston, on January 31, Mr. John Proctor, wholesale druggist, aged sixty-nine.

**WEST.**—At 25 York Road, Birkdale, Southport, on February 1, suddenly, Mr. Robert Henry West, chemist and druggist, aged forty-one (see p. 47). Mr. West, who was a native of Halifax, acquired the business of Mr. Frederick Round, chemist and druggist, eight years ago; the pharmacy dates back about sixty years, and is well known locally for its good position and complete equipment. For five years Mr. West was secretary of the Southport Pharmacists' Association; last year he filled the office of Vice-President, and this year he had resumed his former duties. He frequently represented the Association at federation and other meetings, and was a member of the Southport Insurance Committee. When the British Pharmaceutical Conference met at Liverpool in 1920 Mr. and Mrs. West served on the local Committee and the ladies' Committee respectively, and Mr. West had since joined the Liverpool Chemists' Association, to the proceedings of which he contributed a paper not long ago. He leaves a widow and five children. The funeral took place at the Southport Cemetery on February 4. The following pharmacists were present: Mr. A. H. Messenger (President of the Southport Pharmacists' Association), Mr. W. H. Clubb, Ph.C. (President of the Liverpool Chemists' Association), Mr. Harold Barton, Mr. W. E. Prescott, Mr. Gee, Mr. W. H. Kendrew, Mr. W. H. Smith, Mr. M. Harvey, Mr. Rushton, Mr. Newton, and Mr. Gilley. Floral tributes were sent by members of the family and by Mr. and Mrs. Frank Naylor, Miss Narcross, Mr. John Mathalie, the Southport Pharmacists' Association, and the Liverpool Chemists' Association.



## Trade Notes

AUSTRALIAN SANDALWOOD OIL, distilled by Plainmar, Ltd., is offered by the European agents, Plaistowe & Co., Ltd., King's Cross, London, N. 1.

FOOT-AND-MOUTH DISEASE.—Burt, Boulton & Haywood, Ltd., call attention to the various disinfectants they offer which are suitable for use in foot-and-mouth disease.

COLORITE.—Further particulars regarding the Colorite introductory order are given in an advertisement in this number. A coupon order form is included in the announcement.

COLLOSOL BROMOFORM CO., employed in the treatment of influenza, cough, and whooping-cough, is obtainable from the Crookes Laboratories, 22 Chenies Street, Tottenham Court Road, London, W.C. 1.

DIAL.—Some misconception has arisen in the trade in regard to the position of Dial under the poison laws. This hypnotic, sold by the Clayton Aniline Co., Ltd., 68½ Upper Thames Street, London, E.C. 4, is diallyl-barbituric acid, and is not therefore a "dangerous" drug within the definition of the Dangerous Drugs Act.

SUNDRIES' SHOWS.—Evans Sons Lescher & Webb, Ltd., are holding displays of druggists' sundries, counter adjuncts, and other special preparations at the Palatine Hotel, Blackpool, and the Peveril Hotel, Douglas, Isle of Man. The exhibitions will include a full range of the various articles, and both shows commence on February 13.

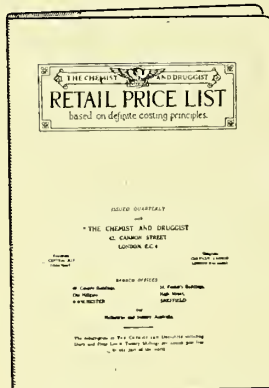
MIDGLEY'S SOAPS.—In the advertisement in this issue of George Holliday & Co., Ltd., attention is drawn to a reduction in the price of unwrapped toilet soaps. The claim is made for the best and best-looking 4d. tablet of toilet soap, and some samples we have received bear this out. The wholesale distributors are Evans Sons Lescher & Webb, Ltd.

ORLWARA BATH BRUSH.—By the ingenious addition of a detachable wire handle, the Orlwara brush has been made into a serviceable bath brush. A waterproof case has also been devised for enclosing the brush, so that it can easily be placed in the travelling-bag. Mr. H. Wanklyn, 17 Manchester Avenue, London, E.C., will be showing this at the British Industries Fair.

GLAXO PRICES.—The proprietors of Glaxo announce that the 7s. 6d. size tin of Glaxo is being reintroduced, and as an inducement to chemists to stock this size a special discount of 1½d. per tin is to be allowed on all supplies purchased before March 25. To ensure that the public will know of the reintroduction of the 7s. 6d. tin an advertising campaign is in progress in more than a hundred newspapers. The other changes to which we referred last week are given in detail in an advertisement in this issue.

ILLUSTRATED SPONGE LIST.—We have received from the London office of Chiapas Compagnie Commerciale d'Outremer, 32 Queen Victoria Street, E.C. 4, whose advertisement will be found in this issue, a sumptuously printed and illustrated descriptive list of sponges specially selected for the British and Colonial markets. The company has agencies in several European countries and buying branches in the chief sponge markets of the world. Ample stocks, uniformly packed, are held in London. Copies of the brochure will be sent to chemists in business on application.

PROTEIN INOCULATION TESTS.—The modern method of testing protein sensitiveness, which is now recognised as an important factor in the efficient treatment of asthma, epilepsy, eczema, and other diseases, has been simplified by a new series of sterilised inoculation tests brought out by Duncan, Flockhart & Co., Edinburgh. The patient is vaccinated with a series of test proteins, those which are found to react being articles of diet which the patient must avoid. The test set we have examined contains supplies of six proteins (beef, milk, cod, potato, cabbage, and wheat), but many other proteins are obtainable. A control and gelatin ejector are also included. The test is new to this country, but has been successfully employed in the United States and Canada. Messrs. Duncan, Flockhart have specialised in the preparation of the tests.



### FILING COVERS

The convenience of having a filing cover for the preservation of the Retail Price List will be appreciated by all users of the list. The filing cover which we have had made specially for the purpose is of stout cardboard with cords, so that the list can be firmly held in the cover. We can supply these filing covers at 1s. each, post free. Postal order or stamps should accompany orders.

### CHANGES IN PRICES

We shall be glad if users will make the following alterations in the January list:

- Ac. tart. pulv.*: Cost—2s. 1b. Sell—2s. 10d. 1b.; 10d. 4 oz.; 3d. oz.  
*Coriand. fruct. pulv.*: Cost—1s. 3d. 1b. Sell—1s. 10½d. 1b.; 7d. 4 oz.; 2d. oz.  
*Coriand. fruct. pulv. (crs.)*: Cost—1s. 1d. 1b. Sell—1s. 7d. 1b.; 6d. 4 oz.  
*Ferri et am. cit.*: Cost—4s. 1b. Sell—1s. 9d. 4 oz.; 6d. oz.  
*Ol. olive (cream)*: Cost—21s. gal. Sell—4s. pt.; 1s. 4 oz.; 4d. oz.  
*Ol. olive (sublim.)*: Cost—18s. gal. Sell—3s. 5d. pt.; 10d. 4 oz.; 3d. oz.  
*Ol. olive (fine)*: Cost—13s. 3d. gal. Sell—2s. 6d. pt.; 7½d. 4 oz.; 2½d. oz.

### APPRECIATIONS

Your price list is greatly appreciated (6/2).

While writing may I congratulate you on the usefulness of the Retail Price List?—(7/2.)

The list is well arranged, and not mixed up with advertisements to bother one when looking up prices (6/2).

The advantage of being able to announce changes in prices through the *C. & D.* each week is great (8/2).

## Information Department

### INFORMATION WANTED

- |   |                                   |
|---|-----------------------------------|
| B/62. "M.D.C." tooth soap                 | C/62. Leeches (in quantity)       |
| B/82. Higginson's "Ideal" Syrup of Figs   | T/62. "Capito" capsuling compound |
| L/12. "La Reine Cream" (makers in France) | P/22. Blayney (No. 4) Tablets     |
| A/62. Indian wound lotion                 | P/29. Sutu tablets                |

### INFORMATION SUPPLIED

- |                                      |   |
|--------------------------------------|---|
| Barff's boro-glyceride, H/27         | Noctyl Tablets, E/82                        |
| Berkfeld filters and candles, A/28   | Roche's Embrocation, H/26                   |
| Bowden's Indian Balm, H/26           | "Revloc" lemonade crystals, D/32            |
| Chlorafin drain-tester, P/27         | Sprinkler-top powder boxes, N/32            |
| "Crescent" strombers, M/311          | "Turknit" washing squares, H/12             |
| "Dip-a-dip" bottle capping, B/26     | Vogeler's Curative Compound, C/3112         |
| Dusart's Syrup, B/27                 | "Whitecross" Baby Powder, D/27              |
| Hibbert's antiseptic medicines, D/26 | Zambelletti's Iron Arseniate capsules, F/22 |
| Hogg's vaporisers, M/22              |   |
| Hooper's Pills, C/32                 |   |
| "Jazz" household dyes, S/22          |   |
| Kolax, S/22                          |   |



## Observations and Reflections

By Xrayser II.

### The Registrar's Report

does not seem to me quite so satisfactory from the Society's point of view as the Society itself affects to think it. During the year 1921 the number of persons on the Register was increased by 925, the number of members of the Society by 151. One is inclined to ask, "Were there not ten cleansed, but where are the nine?" During the same period the number of student-associates was reduced by 1,419, but we are told that this is attributable "not to any falling-off in support of the Society by students of pharmacy," but by the fact that successes at the Qualifying examination "have carried the student-associate into another category." This is very nicely put, but one is again inclined to question, Into what category have they been carried? Not many of them, apparently, into that of members of the Society, since the total gain is only 151. But if the greater number have not become members their change of category is a distinct loss to the Society. Upon the whole, it would appear that the Society is chiefly to be congratulated upon the fact that it is still able to take a cheerful view of things.

### Of the Retiring Members

of Council (the epithet, by the way, refers to their retirement in rotation, not to their natural disposition) six at least are among the most prominent men in pharmaceutical politics. One or two of them have at times made themselves too prominent, and time was when they would probably have been rejected if exposed to the chances of a contested election. Mr. Currie (to name only one) certainly did not add to the dignity of the chair he occupied during the by-law controversy. We English, however, have a tendency to let bygones be bygones, and I do not know whether any good would be done by a contest now. The opportunity ought, however, to be taken of ascertaining the views of these gentlemen on one or two points, particularly on that of the future of our examinations. They should be questioned especially as to their attitude towards the Qualifying examination—the Major is comparatively of little moment—and if there is on the part of any of them a disposition to increase its stringency he or they should be opposed on that account. The question has been allowed to sleep lately, but, though temporarily dormant, it is not dead.

### What is "Quackery"?

Its original sense is essentially that of puffing, or as we now say "boosting," medicines, or one's medical skill and knowledge. The quality of the thing puffed may be good or bad; the term has no necessary reference to that. The doctor, however highly qualified, who flooded his neighbourhood with advertisements of his skill would lay himself open to the same charge as the travelling charlatan, though in a less degree, and would certainly be regarded as a quack by his professional brethren. This is an extreme case: advertisement is one thing, puffery (which is inflated advertisement) is another, or, rather, it is the abuse of advertisement; and the more extravagant advertisement is the more likely it is to be classed as puffery. It is therefore somewhat self-contradictory to tell us, as a monthly circular now before me does, that one of the largest advertisers of patent medicines in the world is "out to kill every atom of suspicion, every savour of charlatanism that may have attached itself to the patent medicine business in the past." It may, indeed, be merely a lack of humour on his part that makes it possible for him to regard his mode of pushing these remedies upon "the teeming millions of the British Empire" as a "campaign against medical charlatanism of every conceivable kind"; but he must be very simple not to see that his insistence upon the power of advertisement *on sick men* (the italics are mine) savours of something very like what he is "out to kill." At all events, "professional men in the fullest sense," if true to their profession, will think so.

### "Moorland Tonic,"

the house-organ of W. B. Cartwright & Co., Ltd., Rawdon, to which you called attention last week, does not give a very definite answer to the question put to it: "Is it moral to beggar one's neighbour by selling two articles for the price of one?" The first answer that occurs to me is that it isn't moral to beggar one's neighbour at all, if that is one's object. Like every moral question, this one can only be answered by reference to the motive. As regards price-cutting in general, one may say that if it is immoral to cut below what yields a fair living profit, it is equally so to maintain prices at what may fairly be called a profiteering level. As regards any particular article the current price of which is unduly high, it is not immoral to sell it at less, nor, so far as I can see, is it immoral in itself to sell anything at less than current prices if I am in a position to do so without endangering my stability as a tradesman, to do which would be dishonest. The morality of competition being granted, it is as moral to compete in price as in anything else, and if my neighbours cannot compete with me, the fault is not mine. But though it is well to have a giant's strength, it is tyrannous to use it like a giant. We are not bound to consider every possible effect on individuals of conduct that tends in the main to the general good, as the cheapening of the necessities of life certainly does, but we are morally bound not to aim at the injury of anybody. If the motive is a bad one the act is immoral, however good its results in some directions; if the motive is good the act is moral, though it may injure an individual here and there.

### Influenza,

as is well known, is simply Italian for "influence," an inflowing, which, following astrological usage, came to be employed especially with reference to the supposed streaming from the heavenly bodies of an ethereal fluid into men and things. As early as the beginning of the sixteenth century, and probably earlier, it had come to signify a visitation or epidemic of disease, not necessarily of any particular kind—it might be an *influenza di catarro*, or an *influenza di febbre scarlattina*, or what not; but the almost universally prevalent catarrhal fever of 1743 caused it to be from that time used specifically as it now is. I do not think it was ever used in any wider sense in England; indeed, its first occurrence here appears to have been in 1743, but its English double, "influence," was used to indicate the source of disease in general long before then. Thus Una, in Spenser's poem, asks the sick knight, "What evil starre on you hath frowned, and poured his influence bad?" This "malign influence of the heavens" seems to be more commonly referred to by our poets than any other; but there are "auspicious stars," and for some reason or other the Pleiades were held to be especially favourable. "Canst thou bind the sweet influences of the Pleiades?" asks the Lord of Job; and Milton says of the rising sun, "The Pleiades before him danced, shedding sweet influence." Let us hope these daughters of Atlas will soon prevail over this present epidemic of influenza! Milton, by the way, has a graceful tacit allusion to ladies' eyes as stars in "L'Allegro":

"With store of ladies, whose bright eyes  
Rain influence."

POINTS FOR WINDOW-DRESSERS.—Addressing the British Association of Display Men in London on January 26, Sir Charles Higham, M.P., advocated keeping windows in the West End of London and adjacent areas lighted until 11 p.m. He laid it down that no window ought to be dressed above the line of the eye. Regarding trademark goods it is, he added, often difficult to get an adequate display. Such things should not be put in a window with goods that cannot be identified. The best form of window-advertising is the simplest, and no advertising is successful unless the article advertised is displayed.



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SHOULD BE STOCKED  
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□ □

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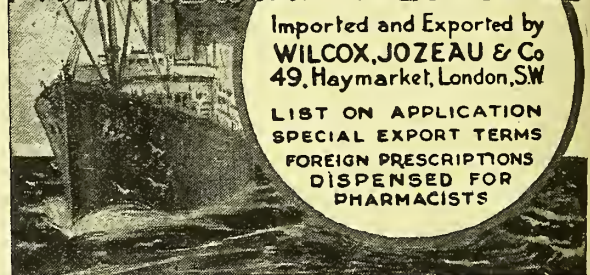
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London, E.C. 2. (2)

## Editorial Articles

### Chemists' Dispensing

We are so used to disparaging remarks about chemists in medical papers that it is refreshing to read saner council in the "Medical World." Dealing with dispensing this journal states:

It is an advantage that his [the physician's] prescription should pass through the hands of a chemist, who is thus able to control any slip of the pen which hurry or carelessness may have produced. I am one of those who contend that no doctor ought to be allowed to dispense his own medicines, and I often wonder that mistakes are not more frequently made by those who carry on a busy dispensary practice. Stock mixtures no doubt obviate the possibility of a good many mistakes, but you frequently have to go outside the list of stock mixtures, and it is always an advantage to have between you and the patient a properly qualified chemist to control your doses. For this reason I hold that panel doctors should steadily set their faces against any system which obliged them to do their own dispensing. To begin with, very few doctors are ever taught dispensing. Since the old system of apprenticeship disappeared the art of dispensing, no less than that of prescribing, has been on the wane. It is right, of course, that medical men should have a knowledge of pharmacology, but the actual dispensing should be left to those whose business it is.

The writer then goes on to refer to the improvement that has taken place in pharmacy through the wholesale chemists having devised elegant forms of mixtures.



## The Quality of Drugs

THE annual report of the Ministry of Health for 1920-1921 contains a good deal of information regarding the administration of the Sale of Food and Drugs Acts. The year 1920 witnessed a return to pre-war activity, so far as the number of samples examined is concerned. Of 111,797 samples of all kinds purchased, 7,903 were reported as not being genuine. The number of drugs examined was 5,353, and of these 453 samples were adulterated or not up to standard. The following are the drugs most often sampled. Others sampled less frequently are included in "Other Drugs."

Acid, boric	Paregoric
" citric	Pills
" tartaric	Powder, Gregory's
Camphorated oil	" liquorice co.
Cream of tartar	" seidlitz
Epsom salts	Prescriptions
Friars' balsam	Sal volatile
Ginger, ground	Soda carb. and bicarb.
Glycerin	" sulphate
Linseed (crushed or meal)	Sulphur
Lozenges, medicated	Sweet spirit of nitre
Magnesia and preparations	Tinct. iodine
Oil, castor	" quin. ammon.
" cod-liver	" rhubarb
" eucalyptus	Vaseline
Ointment, ammon. mercury	Wine, ipecacuanha
" boric	" quinine
" zinc	

It is interesting to note that no defective samples were found of linseed, castor oil, cod-liver oil, ammoniated mercury ointment, paregoric, pills, Glauber's salt, or vaseline. Ground ginger heads the list as regards the number of samples, 674 having been examined. Next come camphorated oil (430), cream of tartar (425), and Epsom salts (392). Nothing is said as to why such a large number of samples of ginger were analysed, but in regard to cream of tartar search was made for calcium sulphate, acid phosphate, lead, and arsenic. In the section of the report dealing with foods, it appears that 63 samples of lemonade powder crystals, etc., were examined, and only three were found adulterated or not up to standard, and attention is called to the Surrey case, where phosphoric acid and salicylic acid were detected in lemon squash. The use of colouring matter in milk is forbidden by the Milk Order, 1920, and proceedings were taken against two vendors who employed annatto to give a rich appearance to inferior milk. A man who sold margarine for butter, and had done so for two months, was convicted and sent to prison for six months. Mention is also made of artificial vinegar (coloured acetic acid) sold as malt vinegar. Storage in a damp atmosphere accounts for defective samples of self-raising flour and baking powder, and it is suggested that further investigation is desirable into methods of packing.

### Importing Proprietary Medicines into Sweden

THE Swedish Royal Medical Board has directed to the Swedish General Consulate in London the following communication, which is now published in the "Svensk Farmaceutisk Tidskrift":

In a letter addressed to the Medical Board, dated December 20, 1921, you asked for information concerning the regulations in force in Sweden regarding the importation and sale of so-called patent medicines, in view of the inquiries received by the General Consulate with reference to this question. In reply the Medical Board wishes to inform you that the importation of the said remedies for sale in Sweden is regulated by Article 6 (a) and (c) of the Pharmacy Law of November 14, 1913, according to which these can be imported by owners of pharmacies and

persons holding a licence to deal wholesale in drugs. If such preparations contain any of the poisons included in Schedule I., they may only be imported by the owner of a pharmacy. According to Article 10 (b) of the above-mentioned law, the sale in Sweden of such compound medicines is only permitted provided the label or wrapper clearly indicates the ingredients by name and quantity; further, in accordance with Article 11, the manufacturer may not fix a higher sale price than permitted by the conditions laid down in the said article, which allows, nevertheless, a reasonable profit to the retailing pharmacist. As it is not always possible for the exporter to calculate the sale price in accordance with the conditions stated in the said article, he can communicate with the importer in Sweden, who, on being informed of the ingredients and their amounts, will be in a position to supply the desired information.

A copy of the law in question is attached to this communication.

Exporters of British proprietary articles should note these restrictions.

### Price-list Latin

To find the mean between pedantry and slipshod locutions in compiling a price list is not easy. That which rejoices the academic mind may not be practicable. It is doubtful, for example, whether beechwood creosote and trimmed rhubarb rhizome would be at once recognised in their completely Latin guise. Many, if not most, of the contractions in common use in price lists (and in prescriptions) would make a Latinist shudder. It may be suggested, however, that they are really symbols rather than contractions, in which case the letters by which a given word is represented bear a purely arbitrary relation to the word itself. Support is lent to this view by an examination of early-seventeenth century manuscript recipes in Latin, in which we find, side by side with the customary alchemical symbols, such abridgments as fol. sicc., ocul. cancr., semin. card., and nuc. mosch. Newly introduced names usually become Latinised in a casual and haphazard kind of way, and it is often some time before a gender and a declension are definitely assigned to them. When recognised authorities, such as Bennett's "Medical and Pharmaceutical Latin," give a word as declinable or indeclinable, it would seem preferable to make use of the declinable variant, on the ground that an increase in the number of indeclinable words tends to formlessness. In THE CHEMIST AND DRUGGIST, II., 1920, a brief exchange of views took place between correspondents on one of the problems of nomenclature that make their appearance from time to time—the gender of ficus and its number in the syrup named after it. As was pointed out, it has been customary in pharmacy since 1788 to use the singular number in titles—e.g., aqua rosæ, not aqua rosarum; but the word ficus is of greater historical interest than was made apparent in the correspondence referred to. Two declensions and the three genders are found among Latin authors of repute when they use ficus to signify the fruit of the fig-tree. The second declension and the feminine gender are, however, predominant in the classics. Varro, a grammarian of the first century B.C., decides for the second declension in "De Lingua Latina" (IX., 80); and the word is also discussed critically by other Latin authors. The fortunes of the fig in the London and Edinburgh Pharmacopœias are not less curious. In the first London Pharmacopœia (1618) it is designated ficus, and is assigned to the fourth declension; it remains so till that of 1746, when it becomes carica, with the definition "fructus aridus ficis communis." In the revision of 1809 it is varied to carica fructus; in that of 1836 it is transformed to ficus, a second-declension noun; and in the last London Pharmacopœia (1851) ficus reverts to the fourth declension. Similarly, in the Edinburgh Pharmacopœia of 1722 we have ficus; in that of 1792 fructus caricarum; and in that of 1817 ficus, a second-declension noun. (Pinus, another heteroclit noun, may possibly be destined to undergo similar vicissitudes in the course of the next three hundred years.) After all such points have been taken into account, however, the utility of a price list is determined less by rigid consistency than by thought for the everyday needs of an average pharmacy.



## Corner for Students

Conducted by Leonard Dobbin, Ph.D.

Communications should be addressed "Corner for Students, 'The Chemist and Druggist,' 42 Cannon Street, London, E.C.4."

### Report on the January Analytical Exercise

THE powder distributed to students on January 10 contained eight parts by weight of lead hydroxycarbonate, one part of lead iodide, and one part of cadmium sulphide. The calculated composition of such a mixture is:

Pb	...	...	...	...	...	...	68.6
Cd	...	...	...	...	...	...	7.8
CO <sub>3</sub>	...	...	...	...	...	...	12.4
I	...	...	...	...	...	...	5.5
S	...	...	...	...	...	...	2.2
OH	...	...	...	...	...	...	3.5
							100.0

There were also present, as impurities, iron and magnesium in small proportion, and a faint indication of the presence of a chloride was obtained on examining, separately, the ingredients of the mixture.

Samples of the powder were distributed to sixty-six students, and thirty-five reports were sent in for examination. The lead was detected by the writer of every report, the cadmium by two only. The failures in the detection of the acid radicals were: Carbonic, 17; hydriodic, 5; hydrosulphuric, 10. Iron as a well-marked impurity was overlooked by thirteen students and magnesium by twenty-six, while only five reported the evolution of the small proportion of water expelled when the powder was gently heated. This analysis has proved to be the most difficult of the three that have been dealt with as yet in the current tournament series. The points in connection with it, however, which have occasioned the most serious failures have been discussed repeatedly in this column, and those students who read habitually and attentively the general remarks on the various analyses and the regularly accompanying replies to correspondents should have been specially alert with regard to them.

The simultaneous evolution of more gases than one when a powder is gently warmed with hydrochloric acid is not uncommonly met with, and its possible occurrence should not be neglected. It is quite remarkable, however, in the present instance to note the number of students who proved the liberation of hydrogen sulphide but omitted to make any test for carbon dioxide, or who detected the latter but failed to test for the former. Omissions of this description are perhaps inevitable, and therefore pardonable, in the first steps in analytical practice, but they mark a very elementary stage which early experiences should soon enable the observant student to leave behind.

The almost uniform failures in the detection of the cadmium are to be attributed mainly to faulty procedure in precipitating the sulphides of the copper group. It cannot be too emphatically insisted upon that the solution to be treated with hydrogen sulphide—whether or not it is at first kept hot during the passing of the gas, with a view to reducing arsenate—must finally be thoroughly saturated with this gas when quite cold and after the concentration of the free hydrochloric acid present has been greatly reduced, either by largely diluting the solution or by boiling off or otherwise getting rid of much of the acid. If these precautions are not minutely attended to, part or the whole of any lead, bismuth, or cadmium that may be present is not precipitated as sulphide, but finds its way into the filtrate and causes confusion and error in the iron group and in later groups. When these essential precautions were taken in this analysis the cadmium could be detected with certainty and ease. That the conditions for precipitation by hydrogen sulphide were wholly unsuitable in many cases is amply proved by the numerous reports of "no precipitate" in the copper group, and this although lead had been

recognised, as chloride, in the silver group and the distinct solubility of lead chloride in water and in dilute hydrochloric acid was sufficient to ensure that some of it would be present in the filtrate which was to be treated with hydrogen sulphide. Some students who got a slight precipitate of lead sulphide in the copper group apparently got little or none of the cadmium precipitated along with it, cadmium sulphide being still more easily decomposed by hydrochloric acid than lead sulphide is. This theme of precipitation by hydrogen sulphide, finally, in the cold and in solutions containing a minimum of free acid, is threadbare by iteration and reiteration in this column, yet when a mixture containing lead, bismuth, or cadmium is distributed, the same errors, due to the same cause, appear in abundance.

One point which considerably exercised the minds of some correspondents was the absence of sulphide from the sodium-carbonate extract. A few even tried to convince themselves—or, at least, to convince the writer of this report—that some sulphide was actually present. Its absence is accounted for by the fact that cadmium sulphide is one of those compounds which can be boiled with concentrated solution of sodium carbonate without undergoing appreciable decomposition.

### PRIZES

The First Prize for the best analysis has been awarded to:

D. BUCKLEY, 4 Carlton Road, Godley, Hyde, Cheshire.

The Second Prize has been awarded to:

JOHN W. HOWORTH, 14 Stowell Street, Weaste, Salford.

*First Prize.*—Any scientific book that is published at a price not greatly exceeding fifteen shillings may be taken as a first prize.

*Second Prize.*—Any scientific book which is sold for about seven shillings and sixpence may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

### MARKS AWARDED FOR ANALYSES

#### 1. Correspondents who are unqualified:

D. Buckley (1st Prize)	84	Alphabeta	...	...	60
J. W. Howorth (2nd Prize)	...	Vicia	...	...	59
Altior	83	Medica	...	...	58
Musker	82	Mait	...	...	57
Alphazo	82	Seriatim	...	...	57
Caglio	81	Ormonde	...	...	56
Element	81	Howard	...	...	51
Pansy	79	Câon	...	...	50
Califigs	78	Uranos	...	...	50
Æsculapius	76	Kudar	...	...	39
Ptah	74	Via	...	...	39
Senecio Jacobæ	74	Aza	...	...	35
Pinus	73	Hic Labor	...	...	33
Sinigrin	73	Krypton	...	...	33
Cannabis Indica	72	Palladwr	...	...	31
Yellow, M/c	62	Perge	...	...	23
		Citral	...	...	15

#### 2. Correspondents who are qualified:

Hopeful	...	58	Pinene	...	76
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### TO CORRESPONDENTS

**ALTIOR.**—The brownish precipitate in the zinc group was due, as you surmised, to lead which had escaped precipitation by hydrogen sulphide. The sodium-carbonate extract did not contain sulphide, and hence sodium nitroprusside could not produce the purple colour characteristic of sulphides. See the general remarks above.

**MUSKER.**—In testing for iodide in the sodium-carbonate extract, you report silver nitrate in a portion acidified with nitric acid as failing to produce a precipitate, and chlorine water in a portion acidified with hydrochloric acid as liberating iodine. Both could not be correct.

**ALPHAZO.**—As indicated in your report, the liberation



of hydrogen sulphide on heating a substance containing an iodide with concentrated sulphuric acid might be due to the reduction of the sulphuric acid, and not to the presence of a sulphide. In the present instance simple heating with dilute hydrochloric acid sufficed to surmount any difficulty, since hydrogen sulphide was abundantly evolved on this treatment. Delicate tests applied to the original substance failed to afford evidence of the presence even of traces of manganese.

**CAGLIO.**—After saturating a hot acid solution with hydrogen sulphide (with a view to reducing an arsenate if present), never omit to dilute largely and saturate the liquid, cold, with the gas, so as to ensure as complete precipitation as possible of lead, bismuth, and cadmium. It is possible that the cadmium, in your analysis, largely escaped precipitation as sulphide.

**ELEMENT.**—It was not possible to remove the lead completely, as chloride, in Group I. The sodium-carbonate extract did not contain sulphide. Read the general remarks and the second sentence of the reply to "Altior."

**PANSY.**—Lead and cadmium should have been precipitated together as sulphides in Group II., if the solution had not been too acid.

**ÆSCULAPIUS.**—Since the powder contained no more than the faintest trace of a chloride, the acid fumes evolved on heating it with sulphuric acid can only have consisted of sulphur dioxide, or hydriodic acid, or of some volatilised sulphuric acid itself. Your query regarding a special method for dealing with such a mixture as this one is too vague to permit of a definite answer, since you do not indicate the nature of the interference with reactions which you observed; but we may state, generally, that only practice and experience will enable you to devise expedients for surmounting, when they occur, the many difficulties which arise in some cases, and for dealing with which no complete code of directions could be constructed. Steady, persevering effort will accomplish a great deal.

**PTAH.**—The presence of a sulphide is not established by the evolution of hydrogen sulphide when a powder containing an iodide is heated with concentrated sulphuric acid, since the gas may be a product of the reduction of the latter by hydriodic acid. The sodium carbonate extract did not contain a sulphide, and the reported formation of a black precipitate of silver sulphide when silver nitrate was added to a neutralised portion could not occur.

**SENECTO JACOBÆ, SINIGRIN, and OTHERS.**—It is probable that the precipitate attributed to aluminium was really due to cadmium.

**PINUS.**—Your report reveals a more than ordinarily spirited endeavour to deal intelligently with a somewhat difficult analysis, in the course of which you devised means to surmount a number, although not the whole, of its more troublesome problems. You should profit by careful attention to the general remarks and to the replies to various other correspondents.

**CANNABIS INDICA.**—Your report, especially the part describing the systematic testing for metals, is too sketchy and incomplete. Details of operations carried out should be mentioned.

**YELLOW, M/C.**—Although you detected the cadmium, you did not succeed in precipitating it completely as sulphide, and the part remaining was no doubt the chief cause of error in the iron and zinc groups.

**ALPHABETA.**—Note that silver iodide is made somewhat lighter in colour by ammonia, but is not dissolved. You report it as soluble in ammonia.

**VICIA.**—In testing for a nitrite you seem to have mistaken iodine liberated by concentrated sulphuric acid from a solution containing an iodide for iodine liberated by nitrous acid. Examine the reaction of a solution of an iodide with sulphuric acid.

**MEDICA.**—See the second sentence in the reply to "Altior."

**MAIT.**—The reactions which led you to conclude that bismuth and a sulphite were present must have been due to lead and the reduction of sulphuric acid respectively.

**CAON and VIA.**—The reaction which you attributed to a nitrate was due to the iodide. Read the first sentence of the reply to "Element."

**URANOS.**—Carefully practise the reaction of dilute phosphate solutions with a properly prepared solution of ammonium molybdate. Many errors in testing for phosphates are evidently due to the use of unsuitable molybdate solutions which yield precipitates of molybdic anhydride (pale yellow) when heated with dilute acids.

**AZA.**—No profitable end was attained by using nitric instead of hydrochloric acid in preparing the original solution in the known presence of lead; indeed, some disadvantage resulted.

**HIC LABOR.**—Your report of "No result" on heating the powder with sulphuric acid, dilute and concentrated, indicates very superficial observation. Others noted the evolution of carbon dioxide, hydrogen sulphide, and iodine in the course of these tests. The colour observed in the resorcinol test for a tartrate was due to iodine.

**KRYPTON.**—It is difficult to understand how you failed to observe the conspicuous evolution of gas when the powder was treated with acids.

**PALLADWR.**—Apparently you wholly misapprehend the procedure requisite to reprecipitate the sulphides of arsenic, antimony, and tin from the solution obtained by treating these with potassium hydroxide. This solution must be acidified: passing hydrogen sulphide through it cannot reprecipitate the sulphides.

**PERGE.**—You carried out a special phosphate separation on the strength of very insufficient evidence for the presence of a phosphate.

**CITRAL.**—The general remarks and the other replies may aid you in recognising where you went astray in your analysis. A summary of constituents detected should have been given.

**HOPEFUL.**—In your report you include the following: Experiment: Tested separate portion with magnesium sulphate; Observation: Slight precipitate; Inference: Carbonate. There is no clear indication as to what the "separate portion" was a part of; but, assuming that it was some of the original aqueous extract from the powder, the precipitate no doubt consisted of lead sulphate formed by the interaction of the added magnesium sulphate with the lead iodide extracted from the powder by boiling water. This aqueous extract did not contain a carbonate.

## Westminster Wisdom

By the "C. & D." Parliamentary Representative

### OPENING OF PARLIAMENT

The fifth session of the thirty-first Parliament of King George V. opened on February 7, the King attending in person. The King's speech referring to the economic position stated that every effort has been made to reduce public expenditure to the lowest possible limit, regard being had alike to the security and efficiency of the State, to public obligations, and to the necessity of relieving our citizens to the utmost extent from the burdens which now rest heavily upon them. Retrenchment upon so great a scale must necessarily involve hardship to individuals and postponement of public hopes. But in a time of great industrial depression, such as that through which the world is at present passing, it is a necessity of the situation that economy be practised by all and in every direction.

### "SUMMER TIME"

A Bill to provide for the fixing of "Summer Time" during a certain period of the year was, on February 8, introduced in the House of Commons by the Home Secretary and read a first time. This measure will give effect to the agreement reached between the French, Belgian, and British Governments, and provides that the "Summer Time" period should commence on the night of the last Saturday in March (on the last Saturday but one in March when the last Saturday is the day preceding Easter Day) and end on the night of the first Sunday in October.



## Cream of Tartar Inquiry

THE application originally announced as having been made by the Manufacturing Confectioners' Alliance and certain importers and users to the Board of Trade that cream of tartar, tartaric acid, and citric acid have been improperly included in the list of articles issued under Part I. of the Safeguarding of Industries Act, came on for hearing before the Referee on February 4, at the Board of Trade offices, Westminster. As will be seen below, however, the actual names of the applicants are not to be disclosed. Sir Arthur Colefax, K.C., and Mr. Kenneth Swan appeared for the applicants, and Sir Duncan Kerly, K.C., appeared for Kemball, Bishop & Co., Ltd., and the Phoenix Chemical Co., Ltd., in respect of all three substances, and for Howard & Sons, Ltd., in respect only of citric acid, as opponents. Mr. Whitehead appeared, as usual, for the Board of Trade. Sir Duncan Kerly explained to the Referee that although there was a little distinction between the three substances, he thought it would be found that they would all stand or fall together. At this point it was explained by a gentleman on behalf of the Manufacturing Confectioners' Alliance that when they made their application to the Board of Trade to have these three substances taken out of the list, they were not aware that other parties were in the field. When that was discovered it was arranged to leave the whole case in the hands of these other people. The Referee said that if the Alliance felt that it could assist in any way during the inquiry, apart from the case put forward by the other applicants, it would be quite open for them to do so, because they had laid a formal complaint. Sir Duncan Kerly then asked for the names of the people for whom Sir Arthur Colefax was appearing. He said he had already asked for them but had been refused. The Referee said he understood that for various business reasons the applicants did not wish their names disclosed. They had satisfied the Board of Trade that they were interested parties, and once that had been done he did not think the question of giving their names arose. He understood, however, that it was for business reasons, which were not apparent to him, that the names were not to be given. He himself had no objection to that course being adopted if the Board of Trade was satisfied. Sir Arthur Colefax said he had no objection to handing the names to the Referee and to Sir Duncan Kerly, but he did not wish to have them published. There were very strong business reasons. Mr. Whitehead said the Board of Trade had undertaken not to disclose the names of the applicants. The Referee: "That settles it. I cannot quite see why it is relevant." Sir Duncan Kerly: "Very well. This, however, is a question of British industry. If, as we suspect, this is a case of foreign exporters and importers here, then it seems to me that it might possibly have some bearing on the political aspect of the case. That is all I have to say about it." The Referee (to Sir Arthur Colefax): Can you tell Sir Duncan Kerly that these firms are British firms using British chemicals? I know one is. Sir Arthur Colefax: Yes, they are. There was no further discussion of the point. The Referee then intimated that he proposed to sit again on the following Monday (February 6). It appeared, however, that none of the counsel engaged in the case would be free to attend. The Referee said there must, therefore, be an adjournment until the following Saturday (February 11), adding, jocularly, that he would like it to go down on record that all the delay in regard to these cases was not attributable to himself.

### THE CASE OPENED

Sir Arthur Colefax, K.C., then opened the case for the applicants, which, he said, was that cream of tartar, tartaric acid, and citric acid had been improperly included in the list of goods issued by the Board of Trade under Part I. of the Act. (It was here intimated that the National Union of Mineral Water Makers, which had also sent in an application, had now merged their case in that of the unnamed importers.) Dealing with cream of tartar, and stating that the other substances were on the same basis, Sir Arthur Colefax said it was

contended by his clients that cream of tartar is not a synthetic organic chemical, and was a substance existing as such in the grape and in other bodies. It was imported into this country, and was obtained by a simple process from argol. It was not an analytical reagent. It was largely used in the manufacture of baking-powder, the manufacture of mineral waters, and in the dyeing industry. It was not a fine chemical, and had never been regarded as such by trade usage. On the contrary, by trade custom and usage it had always been regarded as a heavy chemical. Neither was it manufactured by a process of fermentation, and on all these grounds he contended that it could not come within the Schedule to the Act, and therefore within the list. The complainants in this case were in a difficult position, because they did not know on what basis the Board of Trade had included particular substances in the list. Therefore he had been compelled to take the whole of the Schedule, and he would have to scan everything that could by the slightest degree of imagination be regarded as bringing these three substances within the words of the Schedule. It was the last section of the Schedule which affected the question, the first words of which were "synthetic organic chemicals." The bodies under discussion, however, were organic chemicals, and they were not synthetic. Then came the words "analytical reagents," but he could not for a moment conceive that it would ever be put forward by the Board of Trade, in justification for inclusion, that these substances were analytical reagents.

The Referee: It is not alleged by the opponents that these are synthetic organic chemicals?

Sir Duncan Kerly: No.

The Referee: Is it going to be contended that they are properly included in the list as reagents?

Mr. Whitehead (for the Board of Trade): No. If that were the sole ground they could not be retained in the list. That is a small ancillary point.

Sir Duncan Kerly said he thought it was of some importance, but it was not his main ground.

Sir Arthur Colefax said there might be—he did not say there was—some very small use of these substances in connection with analysis, but they were dealing with things in large quantities, and, except for a possible small use as reagents, their large use was for food, partly for baking powders, partly for flavouring purposes, and a very large use in the mineral water trade, and in the case of two of the substances there was a large use in the dye industry. It looked, therefore, as if the fight would really be on the question of whether they were fine chemicals.

The Referee (to Sir Duncan Kerly): You admit they are chemicals?

Sir Duncan Kerly: Oh yes, all three of them.

Sir Arthur Colefax said he did not know on what grounds the Board of Trade had conceived these substances to be fine chemicals, and that fact made it necessary for him to proceed on one of two lines in order to meet that. The term "fine chemical" might or might not be one which was susceptible of any scientific definition. On the other hand, it might or might not be a trade term. He could understand that the use of a trade term, when established by the evidence, might be a ground upon which to decide whether to include or exclude a substance from the list. He was going to say that "fine chemical" was a trade term and that not one of the three substances in this case came within that expression as used in the trade. In that connection there would have to be considerable reference to the trade literature and to trade catalogues, and he would call witnesses from the trade who would say that all three substances were treated as heavy chemicals. He would have to refer to the "Journal of the Society of Chemical Industry," THE CHEMIST AND DRUGGIST, etc., to show that these substances had always been regarded as heavy chemicals. He had looked at the evidence called on behalf of the Board of Trade in the santolin case, in order to ascertain what had actuated those advising the Board in the view they had taken of the meaning of the term "fine chemical," and he did not think he would be wrong in saying that they had regarded it as a trade term and in antithesis to "heavy chemicals," and that the Board of



Trade excluded from the term "fine chemicals" such chemicals as were handled in large quantity or were of limited purity.

Mr. Whitehead (for the Board of Trade): Did I say anything about the meaning of the word "large"?

Sir Arthur Colefax said he thought he was right in saying, after looking at the shorthand notes of that case, that the Board of Trade had excluded from the term "fine chemicals" those chemicals handled in large quantities or of limited purity.

Sir Duncan Kerly: I have the highest authority for saying that we may refer to a thing as "large" without knowing what we mean by it.

#### SOURCES OF IMPORTS

Sir Arthur Colefax then went on to refer to the imports of the three substances in this case. The total imports of cream of tartar from 1910 to 1920 varied from 2,000 to 4,000 tons per annum. During certain periods of the war only comparatively small quantities came in, and these from one or two special countries. Normally, it could be taken that France was the largest source of supply of cream of tartar, and that Germany was a very considerable exporter until the outbreak of war, but not so large as France. The imports from Italy were relatively small until we had to avail ourselves of her source of supply during the war. The imports of tartaric acid varied from 1,000 tons to something over 2,000 tons a year, and in this case Italy was a long way the largest exporter to this country. Germany did export considerable quantities up to the outbreak of war, and apparently, from the figures, we got some in 1915, although only a very small quantity. The chief supplies came from Germany, France, and Italy, and during the war our supplies came from France and Italy. The figures for citric acid did not cover so many years as in the other cases, but in 1920 we imported 197 tons, and again it was France and Italy that sent the material. He wished specially to draw attention to the fact that there was no raw material of this kind in this country, because, naturally, the warmer climates were better suited to the cultivation of the grape, the lemon, and the lime, and accordingly it was in these other countries abroad that we found the source of argol, which was the crude tartar. Argol, in fact, consisted in part of cream of tartar, so that it existed as such naturally. He understood that in the fermentation of the grape juice alcohol was formed from the sugar of the grape. Aqueous alcohol was formed of varying strength, and bitartrate of potassium or cream of tartar was precipitated as the fermentation proceeded. The natural tartrate was an impure body called "argol," and cream of tartar was undoubtedly a prepared body, but it was prepared in this way: it existed as such in the argol, and it could be obtained by the process of crystallisation and purification. What he wished to emphasise was that there existed in natural argol potassium hydrogen tartrate, or cream of tartar, mixed with impurities from which the pure cream of tartar was separated.

#### THE DEGREE OF SKILL

Judging by the Schedule to the Act, it seemed that some point might be made, in connection with the term "fine chemicals," as to the degree of skill and technical supervision required in the course of manufacture. There seemed to be an intention to set up the case; ultimately, that in the manufacture of these substances there was some outstanding chemical skill required. In that case, he was instructed strongly to combat the suggestion, because his contention was that the process was a relatively simple one. Any chemical process presumably involved some chemical supervision. It might be very small in some cases, but if they contrasted such a process as this with some of the most commonly practised chemical processes he could not conceive that it could be suggested that there was any greater skill required than in these other common processes. That would be a matter of evidence. These were bodies which were used in very large quantities, and it was a very serious thing to put cream of tartar on this list issued by the Board of Trade.

It naturally appealed to one as to why it had been put on the list, because it was not a case in which the substance fell within any of the specified words in the Schedule. It was inconceivable that anyone could suggest it was a fine chemical. It was handled in large quantities in the same way as soda ash. Moreover, he would like to point out that this Act was one, so far as Part I. went, for the safeguarding of industries, but he could not conceive that any one of these substances could be regarded as a key industry, unless it could be held that the preparation of the imported raw material in this country was a key industry. It seemed to him, therefore, that there was a very easy end to this case because the Board of Trade must justify that position, because there was not an ounce of any one of these substances to be obtained naturally in this country. We could not, in time of war, obtain any of them except from our Allies, and we were absolutely dependent upon our Allies or our enemies for all our supplies. Therefore, it seemed to him impossible to say that the manufacture of these things was a key industry. That was a point which he asked the Referee to bear very strongly in mind. "Key industries" was to some extent an indefinite term, but he could conceive certain industries included in the Schedule being key industries. For instance, optical glass, because we had the ingredients in this country, and there were other things which could be made from raw materials which we had here. Another use of these substances was in the preparation of health salts, known as fruit salts, and that brought in the pharmaceutical aspect. No doubt in some lists issued by the trade, and issued specially for the pharmaceutical side, these substances would be found included, and the Referee would have to consider that, and attach what weight he thought he should to the view that because there was this small pharmaceutical use then they were fine chemicals. There were many chemicals which the pharmacist must have, and many of them were in the British Pharmacopoeia to-day, often by virtue of their extreme degree of purity. That, however, was not so in this case. As imported, these bodies were not of a high degree of purity. Certainly some of the imports were for purification here, otherwise there would not be the opposition to this application, and the highest degrees of purity were obtained as the result of processes in this country.

The Referee: Would it not be possible for cream of tartar at one stage to be a heavy chemical and at another a fine chemical? Sir Arthur Colefax replied that as a matter of commerce cream of tartar is never handled in less than 5-cwt. lots.

The Referee said that in the statements that had been handed in to him a good deal was said about the state of purity. Cream of tartar might conceivably be a heavy chemical in its impure state when imported, and a fine chemical when refined in this country. Sir Arthur Colefax said he understood the stuff as imported was sold on an analysis of its content. He did not at the moment know the figures, but they would be given. Sir Duncan Kerly: Do you mind telling us, when you say "the stuff," do you mean the fine chemical product or the argol?—Sir Arthur Colefax: I do not know what you mean by the "fine chemical product." Sir Duncan Kerly: When you say it is bought and sold by analysis, do you mean the argol or the cream of tartar?—Sir Arthur Colefax: Both. Sir Duncan Kerly: And tartaric acid?—Sir Arthur Colefax: I do not know. The Referee: Is argol included in the list as a separate thing?—Sir Arthur Colefax: Not as a word. The Referee: Then the substance described by the word "argol" does come in free?—Sir Arthur Colefax: There is no doubt about that. I believe that crude argol contains about 25 per cent. of tartaric acid. Sir Duncan Kerly: Is there anything but crude argol?

Sir Arthur Colefax said he did not know, but they would hear about that from the witnesses. If it was meant that partly purified argol was imported, he should say it was not. Certainly purified cream of tartar, tartaric acid, and citric acid came into this country, and all these were in the list. All he was concerned with was what was in the list and what the Board of Trade said was imported.



The Referee would hear how these things were made, and what it was which came in. He was concerned with the commercial products. All three were bodies of varying purity in commerce and always had been, and his case was that not one of the three should be included in the list issued by the Board of Trade. He was concerned with the commercial products and not with products of excessive purity, although he recognised that they had considerable purity in commerce. He did not think he could usefully address the Referee further at this stage.

#### WHAT IS A KEY INDUSTRY?

Mr. Whitehead said he would like to put one or two considerations before the Referee before the evidence was begun. This was not the first time the Referee had been asked to consider whether the subject of a particular complaint was or was not a key industry. He himself had already dealt with that in two or three of the earlier cases, and he wished to make this point at the very beginning of this case. The whole of the duties put upon the Board of Trade from the point of view of Part I. of the Act were set out in Sub-section 5 of the first Section of the Act, and that was that the Board of Trade might, if it liked, issue lists defining articles which were to be taken as falling under any of the general descriptions set out in the Schedule.

The Referee asked whether they need worry about that. He knew what Mr. Whitehead was going to say, as he had dealt with it in the *santonin* case—viz., that it was not the duty of the Board of Trade to decide whether any of these things came within the description "key industry." He himself had indicated in the *santonin* case that the only way he could regard that was in helping to get at the meaning with which the word "chemical" was used in the Schedule, the word "chemical" being one which it was admitted had no definite meaning. In the present case, however, it was conceded that these things were chemicals, and once that was conceded he did not see how the term "fine chemical" could be affected by the preamble of the Act.

Mr. Whitehead, continuing, said he wished to point out that here they were dealing with a great Government Department, and there were certain things which were regarded by the Department as being fundamental to the Constitution. He wished it to be known and understood through the Referee that the Board of Trade had not at any time regarded it as part of its function to decide "yes" or "no" whether a particular thing was a key industry. The Board had taken its functions under the Act to be circumscribed by the sub-section to which he had referred, and, as he had previously submitted, they regarded that also as circumscribing the functions of the Referee, always subject to the observation which the Referee had made as to utilising the preamble with a view to resolving the construction of the particular words. He did not know whether Sir Arthur Colefax was proposing to lead evidence with a view to showing that the substances in question in the present case constituted a key industry or not. In that case it would be necessary for the Board of Trade to take the opinion of the law officers of the Crown on the point to guide parties in these cases if this question as to a key industry was to be raised time after time in these applications. They ought to know how far that was a matter which could be taken into consideration in these inquiries.

Sir Arthur Colefax said he understood the suggestion was that the Referee should not consider the Schedule at all in the light of whether it was limited to key industries; that the Schedule came outside anything that could properly be called a key industry. See what the result of that was! There were some people in this country who, at this moment, were politically biased, one way or the other, about this Act, and it was an extraordinary thing to hear from counsel representing the Board of Trade, after what had passed in the House of Commons, and what was passing in the country at the present time, the suggestion that the Schedule to the Act was not limited to the professed scope of it as an enactment.

Mr. Whitehead: I have made no such suggestion.

Sir Arthur Colefax: Then I do not understand my friend's suggestion, because he has submitted that you (the Referee) are not to consider whether it is a key industry or not, and that we are only to consider whether it is a fine chemical, simply and solely. If you consider that, divorced from the question of a key industry, then you are actually doing this, and it is what you are asked to do; you will be regarding this Schedule as uncontrolled by the expressed purpose of the enactment, and such a view, I venture to think, the Board of Trade would not desire to be submitted to you here. It may be the true legal view of this statute; that whoever was responsible for the Schedule did not stop to consider the connection between the Schedule and Part I., which is clearly expressed to deal with the safeguarding of key industries, and framed the Schedule regardless of whether the industries were key industries or not, and that the Legislature, in passing the Act, overlooked that. I am not saying that this may not be the true legal interpretation of the Act; it may perfectly well be, and you (the Referee) may find yourself driven to say "I am not limited, in interpreting this Schedule, to products that fall rightly within key industries." If you are, then the sooner it is known the better.

The Referee: Supposing we were fighting about a substance which every chemist and everybody industrially concerned agreed was a fine chemical; supposing they also agreed there was not, and could not be, any industry in connection with it at all here—I do not think that *santonin* was a bad illustration—would you then say that a thing conceded to be a fine chemical but hopelessly outside a key industry should be cut out of the list?

Sir Arthur Colefax: I should.

Mr. Whitehead: There is the whole issue.

Sir Arthur Colefax: I say you are not entitled, and it is not the true interpretation of this Schedule, to include within it something the manufacture of which is not a key industry.

The Referee: If that is a point you press, that has got to be determined elsewhere. The view I formed (in the *santonin* case)—and I adhere to it—is that the limit I can go in looking at the preamble is this: I had got the word "chemical." Some of the witnesses on one side said that was a very vague term, but that it did imply something manufactured. The other side said it also included things which are extracted, and in ascertaining what I thought the word "chemical" meant in this Schedule I thought I was, in the circumstances, entitled to bear in mind the preamble of the Act and adopt the more limited meaning. I may have been wrong, but it was the principle in my mind, that to that extent I was entitled to regard the preamble, but if the thing was clearly within the descriptive word in the Schedule, then I could not look at the preamble at all. Therefore, if you want me to change that view, it is one of the things which at some stage it is proper to have a case stated to have determined, and I protect your rights in that way. I am still open to conviction and argument and authority, but I did go into the authorities in connection with the *santonin* case, and it seemed to me that that was the very limit to which I was entitled to go in construing a section of the Act of Parliament or a Schedule—viz., that you can only look at the body of the Act if you have got ambiguity. I do not even know that the Board of Trade think I am entitled to go that far.

Mr. Whitehead said he had made certain submissions and cited certain authorities to the Referee on this point, and he did not want to have to do that in every single case. He was content with the Referee's statement of his views for the time being, but Sir Arthur Colefax had fathered upon him (Mr. Whitehead), as counsel for the Board of Trade, and therefore on the Board of Trade, certain considerations which had not been in his mind. The whole point, so far as the Board of Trade was concerned, was that if it were established, either by admission or by evidence, that a certain substance was a fine chemical, then the Board was bound to put it in the list, and it was not open to the Board of Trade to consider whether it was a key industry or not. That had been done by Parliament in putting fine chemicals in the Schedule.



Sir Arthur Colefax said he would be content to have the point kept open. He did not question the preamble of the Act, but took his stand on a different basis. The Act was entitled "The Safeguarding of Industries Act," 1921, and it was divided into two parts. It was perfectly clear that Part I, related to the safeguarding of key industries, and the Schedule was a Schedule to Part I.; and in considering them the question would arise as to terms which had and terms which had not a precise and scientific meaning. The considerations in the two cases were quite different. Santonin was a clear case. It was admittedly a chemical, but it was not a key industry, and in that case there was an obvious conclusion. Where they had substances which did not come within a term which had any precise and scientific meaning, then the case was entirely different, and in arriving at the meaning of the term "fine chemical" in such a case as that the Referee must have regard to the preamble of the Act and ascertain whether it was a key industry. That was quite different from what Mr. Whitehead had said. So long as his rights in that respect were kept open, he was content to go on with this case. His evidence would not be directed to the question of key industries to any extent, if at all.

The Referee asked if it would help if he said this: There were four things: (1) The facts; (2) is there a reasonable definite commercial trade meaning; (3) if so, what is it? and, if not, (4) is the substance generally regarded as a fine chemical in the trade? Supposing, for instance, it was definitely accepted in the trade—he knew it was an absurd suggestion—that a thing which was 90 per cent. purity was a fine chemical, that would settle it, but supposing there was no sufficiently definite trade meaning at all, the question to consider then was "Is it a fine chemical?" Sir Arthur Colefax accepted this as indicating the position, leaving aside the question of key industry.

#### CHEMICAL TRADE EVIDENCE

Mr. A. F. Butler (R. W. Greeff & Co., Ltd., Thames House, Queen Street Place, London, E.C.) handed in a number of price lists of his firm in all of which cream of tartar, tartaric acid, and citric acid were listed as technical and industrial chemicals. These lists dated back to 1913. Quotations were read from these lists to show that the chemicals in question were dealt with in large quantities—5-cwt. lots and upwards. The heading "technical and industrial" chemicals was used as indicating heavy chemicals and distinguishing them from fine chemicals. Although there was a heading in the lists in question of "Fine chemicals and pharmaceutical preparations," none of the three substances in question was ever put under that heading, and that classification was consistent with his knowledge of the trade. These three substances also came in a list intended for the textile trades. In the trade, cream of tartar, tartaric acid, and citric acid were regarded as heavy chemicals and dealt in as such. In one list sent out specially to buyers of pharmaceutical products, citric acid appeared, but it also appeared in the other lists as an industrial and technical chemical. The pharmaceutical list went out to wholesale druggists, and as there was a pharmaceutical use for it, it was naturally included in that list.

Sir Duncan Kerly, cross-examining, obtained from witness that he was not a chemist and that he spoke only from the trade point of view. He said they distinguished between heavy and fine chemicals very largely according to the class of people to whom the chemicals were offered. Sir Duncan Kerly: So I thought. Witness, in the course of further cross-examination, said he regarded as heavy chemicals all those that were not used for medicine. Speaking roughly, everything that was not useful for medicine went in under the heading of heavy chemicals, no attention being paid to the degree of purity. Counsel referred to the fact that in these lists glacial acetic acid 98 to 99 per cent. and 99 to 100 per cent. was referred to as a heavy chemical, whereas in the trade it was regarded as a fine chemical. Witness would not agree that that is so. Glacial acetic acid was sold for industrial purposes and was looked upon as a heavy chemical. Neither would he agree that chemically pure formic acid was a fine chemical so

far as trade custom was concerned, and the same answer was given in relation to tannic acid, all of which substances are in witness's firm's list as heavy chemicals. Sir Duncan Kerly mentioned a number of other chemicals included in the heavy chemical or "Technical and Industrial" list—which terms, witness said, were synonymous—and suggested that the lists were arranged according to the class of buyers to which they were to be sent, and that they had no relation to what was actually a fine or a heavy chemical. Witness agreed that that was so to a large extent, but not that things which were regarded in the trade as fine chemicals were put into the heavy chemical list. The tendency was for fine chemicals to be substances which were sold in small quantities. Counsel immediately pointed out that in the fine chemical list of Messrs. Greeff's magnesia sulphate was offered in 2-cwt. lots. Witness agreed, but said that it was also in the other list. Sir Duncan Kerly: It really comes to this, that these things go into one or other of the lists according to the use for which you expect your customers to require them? Witness: Very largely. He added that in the 1922 list citric acid was in both the heavy and the fine chemical list, and it was the same substance in both cases.

Mr. Whitehead then cross-examined for the Board of Trade on similar lines. He also drew attention to a number of publications from which he suggested it was evident that some fine chemicals were also used for industrial purposes. For instance, saccharin was a fine chemical, but it was very largely used industrially in the aerated mineral-water trade. Witness agreed there might be some overlapping in the classification in trade lists. Re-examined, he said that technical and industrial chemicals as set forth in the trade lists were generally regarded as heavy chemicals, but there were cases in which the same substance appeared in the fine as well as the heavy list. There were also cases in which they were distinguished, as between heavy and fine, according to their degree of purity. Cream of tartar, however, was not distinguished according to purity.

The Referee: These lists do not settle whether they are fine or not? Witness agreed that that was so in some respects. The Referee: Your method of classifying does not help one if the same chemicals are included in both lists? Witness: No. It is a rough and ready method, and I cannot say it is a rigid division. The great thing in our minds is the purpose for which the chemicals are to be used. Generally speaking, however, fine chemicals are very pure, but for industrial purposes it would not matter much, with certain reservations. Sir Arthur Colefax: I do not suggest that you can define "fine chemical" by merely putting forward a trade term.

Mr. W. G. Wilson (a director of Charles Page & Co., Ltd., 47 King William Street, E.C.) gave similar evidence. He had been twenty years in the trade, and had always regarded cream of tartar, tartaric acid, and citric acid as heavy chemicals. He handed in a list from Mr. J. M. McAndrew Waddell, of Glasgow, who was professedly a dealer in heavy chemicals, and said his firm always quoted these three substances.

Cross-examined by Sir Duncan Kerly, witness said he could not answer the question as to whether a fine chemical could also be an industrial chemical. He did not think purity or difficulty of preparation or manufacture had anything to do with the classification of a chemical as a fine chemical. From the traders' point of view, the line of division was whether the chemical was used for an industrial purpose. In the main, he could not tell whether a chemical was a fine or a heavy chemical until he knew the purpose for which it was to be used. Sir Duncan Kerly then asked if it was not the fact that the heavy chemical trade dealt only with things by the thousand tons or so. Witness would not agree, although some heavy chemicals were dealt with in thousands of tons. The mere bulk, however, did not affect him one way or the other. The main question was the use to which the material was to be put. If it was to be used for an industrial purpose then he should call it a heavy chemical; if not, then he should call it a fine chemical.

Mr. Whitehead, in cross-examining for the Board of Trade, made a number of references to THE CHEMIST AND



DRUGGIST, which witness acknowledged as the best-known paper in the trade. It was pointed out to witness that in the issue for October 30, 1920, there was a market report covering different varieties of chemicals, and that citric acid was classified as a pharmaceutical chemical. Sir Arthur Colefax said he could show many cases in which *THE CHEMIST AND DRUGGIST* did not include it under pharmaceutical chemicals; but he agreed that that journal left the point rather doubtful as regards citric acid. Mr. Whitehead then referred to *THE CHEMIST AND DRUGGIST* for September 10, 1921, where cream of tartar was mentioned in the market report under the heading of pharmaceutical chemicals. In the issue for September 17 it was in the heavy chemical list. Going back, he also pointed out that in the issue for February 5, 1921, it was under pharmaceutical chemicals. In the issue for September 24, 1921, cream of tartar was restored to the pharmaceutical list.

Sir Arthur Colefax, in the course of his re-examination, dealt with the reference to *THE CHEMIST AND DRUGGIST*. Under the heading of London Drug-auctions, in the issue for September 10, 1921, he pointed to a reference to cream of tartar (substitute) under the heading of heavy chemicals. [This is not so in that issue.—Ed.] The other references he said he would deal with later. Witness was then asked his views as to the uses of cream of tartar, tartaric acid, and citric acid, and gave them substantially as Sir Arthur Colefax did in his opening speech.

Sir Duncan Kerly said he should have thought they would have been agreed on that. He suggested that the enormously greater use of cream of tartar was in the baking trade and for domestic cookery. As regards tartaric acid, there was a small medicinal use and a very small use as a reagent. It was also used in baking-powder and for the manufacture of mineral waters; also in connection with saline drinks, as well as to a small extent in the arts and in photography. Sir Arthur Colefax said he did not agree with this, because there was a very large use of tartaric acid in the dye industry. Witness, in answer to a question, said he should think that 75 per cent. of the tartaric acid sold by his firm was sold to the dye industry, and 50 per cent. of cream of tartar to the textile industry. The bulk of the citric acid was used outside textile purposes.

Mr. P. J. Kuhne (market clerk to Victor Blagden & Co.) said that he was concerned with the buying and selling of heavy chemicals, and the three substances mentioned in this case came within his department. He agreed with the previous evidence that these were always considered heavy chemicals in the trade. Orders for twenty tons of cream of tartar were not uncommon. [The attention of the witness was then called to various issues of the trade journals in which cream of tartar, tartaric acid, and citric acid were referred to in market reports under the heading of "Heavy Chemicals," although there was another heading of "Pharmaceutical Chemicals."]

Sir Duncan Kerly's and Mr. Whitehead's cross-examination was on the same lines as that of the previous witnesses, but one special point may be mentioned. Mr. Whitehead called witness's attention to the fact that in an advertisement of his own firm issued that week an offer was made of potassium bromide crystals and granulated, which were admittedly fine chemicals. Therefore Victor Blagden & Co. dealt in other things than heavy chemicals. Witness replied that he believed a new department had recently been opened, and it might be that the firm was intending to develop a business in fine chemicals. In re-examination, he said he had always regarded himself as in the heavy chemical trade, and he had always dealt in the three substances which were the subject of this inquiry.

#### MR. KIRKBY'S EVIDENCE

Mr. William Kirkby, M.Sc., F.I.C., Ph.C. (ex-President of the British Pharmaceutical Conference, member of the American Pharmaceutical Association, some time lecturer at the University of Manchester, and author of text-books), was next called. He said he was also associated with Jewsbury & Brown, Manchester, mineral-water manu-

facturers. He had never regarded these three substances as fine chemicals, and although he did not deal in either heavy or fine chemicals, he should certainly not look upon these three substances as fine chemicals. He had handed in certain price lists which Jewsbury & Brown had received from Prescott & Co., Hulme, the Crown Chemical Co., Chas. Zimmermann & Co. (Chemicals) Ltd., Sparks, White & Co., Ltd., S. W. Royse & Co., Ltd., and W. Meadowcroft & Sons, all of which quoted for cream of tartar, tartaric acid, and citric acid in large quantities. These could not be looked upon otherwise than as typical heavy chemicals. He also made further references to the trade Press, in which all these substances were dealt with as heavy chemicals. Among these references were *THE CHEMIST AND DRUGGIST* for January 20, 1912, March 27, 1915, June 19, 1915, February 5 and 19, 1916, and March 4, 1916. These are chiefly market reports and deal with the substances in the case as heavy chemicals.

Witness then went on to explain the process by which cream of tartar is extracted from crude argol. Argol, he said, is a product of the wine industry. Argol was thrown out as the alcohol accumulates in the fermentation process. It was a solid substance deposited as the liquor cleared, and was an impure body, not being a definite chemical substance. There was a good deal of organic matter, quite apart from the particular organic chemical which was present in it. In cream of tartar there was the potassium bitartrate which existed as such in the argol. Although he himself had not made cream of tartar, Mr. Kirkby said he knew, from his general knowledge, what the process of its manufacture was. The preparation of cream of tartar was effected by a process of solution and re-crystallisation, the effect of the solution being to separate it from some of the other things which were there. Argol was insoluble in the alcoholic liquor, but not in water, and as the strength of the alcohol increased the argol was deposited. That was then taken and treated with water, dissolving out what was soluble and re-crystallising it, thus obtaining the bitartrate of potassium, the crystals remaining being the cream of tartar. In his opinion, very little skill was required to carry out the process. Indeed, the process as carried out to-day was the same as that followed in the eighteenth century, when argol was first purified. Cream of tartar was imported in crystal form as well as in powder, the powdering taking place in mills. The degree of purity varied from 92 to 100 per cent., and was generally from 99 to 100 per cent.

Sir Duncan Kerly said that all this was so wildly contrary to the expert evidence that he was going to call that he was beginning to wonder if Mr. Kirkby knew anything about it. Sir Arthur Colefax said that Mr. Kirkby was telling them what he, as a chemist, believed. Up to now this evidence did not disagree with the further evidence that he was going to call from the manufacturers. He did not know why Sir Duncan should make the statement he had. Sir Duncan Kerly said it seemed to him that Sir Arthur Colefax was taking the witness rather further than he wanted to go. Sir Arthur Colefax said the witness had merely indicated the kind of process which he believed was followed in obtaining cream of tartar from the crude argol. Sir Duncan Kerly said that argol was his clients' raw material.

Mr. Whitehead, who cross-examined for the Board of Trade, put to witness a diagram in the "Journal of Industrial and Engineering Chemistry" for June 1921 depicting the plant necessary in the manufacture of citric acid, and suggested that the process was a very complicated one, and requiring great skill, but Mr. Kirkby would not agree. He admitted that strict laboratory control was necessary, but that did not necessarily mean highly skilled control. It became largely a matter of routine.

The inquiry was then adjourned until Saturday, February 11.

The current monthly report of the medical officer of health for the City of London states that one sample of Gregory's powder informally taken contained 66 per cent. of magnesium carbonate. The vendor has been cautioned.



## Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

42 Cannon Street, E C 4, February 9

THE Mincing Lane produce markets continue much in the same condition as previously reported, the absence of export demand on an adequate scale, which, prior to the war, was a staple of the merchant business, being largely responsible for the depression. The further appreciation of sterling as expressed in dollars is a good feature, the quotation on Wednesday being \$4.34½-\$4.35. This will tend to cheapen drugs from that source; at the same time, several items, including senega, balsam tolu, balsam Peru, and serpentry, have advanced in the United States on their merits. New Norwegian cod-liver oil is easier, with the catch of cod opening well. Japanese insect flowers are slightly dearer, and good liquorice-root is scarce. Nux vomica is easier for shipment. Asafetida is steady, but still comparatively dear. Japanese refined camphor is firmer, but, in view of the quantities afloat, which will be the subject of forced liquidation on arrival, it is doubtful if the present position can be maintained. Agar-agar is firmer. Canary seed is very firm, and some descriptions are higher. Mustard seed is easier. Morocco caraway is very scarce, and dill is still unobtainable. Menthol continues firm.

Higher	Firmer	Easier	Lower
Balsam tolu Canary seed Hen-yolk Pitch Potash prussiate (makers')	Agar-agar Camphor (Jp. ref. slabs) Insect flowers Mace (W.I.) Soda prussiate	Acetanilide Acetone Benzaldehyde Cassia oil Castor oil (French) Cedarwood oil Citric acid Cloves Collodion Copper sulphate Glauber's salt Jalap resin Lead acetate Mustard seed Naphthaline Nux vomica Patchouli oil Pepper Soda caustic Vanillin White oils	Chrysarobin Clove oil Cod-liver oil Fish oils Morphine salts Peppermint oil Strychnine and salts Sugar Tansy oil Veratrine
Saffron Senega	Steadier  Calcium lactate Paraformaldehyde		

### Cablegrams

NEW YORK, February 7.—Business is fair. Senega has advanced to 80c., serpentry root to 90c., balsam tolu to 38c., and balsam Peru to \$1.60. Milk-sugar is dearer at 18c., and refined camphor has advanced to 96c. per lb. Belladonna root is cheaper at 12c., and belladonna leaves at 11c. are also lower. Short buchu has been reduced to \$1.00, hexamine to 67c. per lb., and citric acid to 44c. per lb.

BERGEN, February 8.—The total catch of cod for the whole of Norway since the opening of the season amounts to 1,300,000, against 1,200,000 for the corresponding week of last year, and the yield of steam-refined medicinal oil is 2,141 hectolitres, against 1,569 hectolitres for the same period of 1921.

### Crude Drugs, etc.

ACONITE.—Japanese is scarce on the spot, and it is difficult to negotiate further imports owing to the low price offered by buyers. Spanish is about 10d. per lb. on the spot and 8d. c.i.f.

AGAR-AGAR is firmer, sellers of No. 1 Kobe strip quoting 3s. 6d. per lb. on the spot, and new crop at 3s. 5d. c.i.f. No. 2 is offered at 3s., and new crop to arrive at 3s. 2d. c.i.f.

ANTIMONY.—English refined is held for £37 to £39 per ton for small lots, according to brand. Foreign regulus is very dull at prices varying between £22 and £23 10s., according to destination, the lowest figure referring to f.o.b. terms for export. Chinese crude on the spot ranges from £16 to £16 10s., but shipment is obtainable down to about £13 c.i.f.

ASAFETIDA is steady, with a fair business, the value of good quality continuing dear at £11 per cwt.

BALSAMS.—*Tolu*.—Spot supplies of good quality appear to be practically exhausted. Sales have been made at 1s. 10d. to 2s., and 2s. 3d. is now asked. New York has advanced to 80c. per lb. *Peru*.—Business has been done, for export to the Continent, on the basis of 7s. per lb. spot. *Copaiba* is unchanged at 1s. 9d. per lb. spot for B.P.

CAMPOR (CRUDE).—The spot price is 3s. 4d. per lb., and to arrive 3s. c.i.f. has been paid. Sellers quote February-April shipment at 3s. 2d. c.i.f.

CAMPOR (REFINED) is firmer, with spot sales of Japanese refined slabs at 3s. 8d. per lb., and 3s. 10d. is now asked. To arrive, February-April shipment is quoted at 3s. 7½d. c.i.f.

CASCARA SAGRADA continues slow of sale, with three- to four-year-old bark offering at 77s. 6d. on the spot for small lots.

CINCHONA.—At the auction to be held at Amsterdam 2,429 packages, weighing 150,647 kilos., Java bark, 109 packages Ceylon, weighing 3,318 kilos., and 25 packages African, weighing 1,263 kilos., will be offered.

COCOA BUTTER.—Prime English ex works is 1s. 8½d. per lb. in not less than 1-ton lots.

COD-LIVER OIL.—The new Norwegian oil for forward delivery is offered at the cheaper rate of from 90s. to 95s. per barrel c.i.f., which are, of course, speculative prices; spot rates vary from 95s. to 98s. At the moment buyers prefer to wait developments.

DRAGON'S-BLOOD.—No reboiled has been on offer for many months, and there is no prospect of further imports.

GLUCOSE.—Guaranteed water-white for February delivery is 25s. per cwt., duty paid, landed terms.

HEN-YOLK is firm and dearer, with spot sellers of Chinese at 125s. per cwt., and April shipment has been done at 90s. c.i.f., April-May shipment at 85s., and April-June at 73s. to 74s. c.i.f. Dried yolk is 3½d. per lb., sprayed whole egg 5½d., native dried whole 3d. per lb., all spot. Prime hen-albumen on spot is 2s. 10d., and sellers of April-June shipment quote 2s. 6d. per lb. c.i.f.

HYDRASTIS.—With the improvement in the American exchange spot can be had at 18s. to 18s. 6d.

INSECT FLOWERS are slightly dearer at from 215s. to 220s. per cwt. for Japanese three-quarter-closed flowers; to arrive, 235s. c.i.f. is quoted.

LIQUORICE ROOT.—Both decorticated and natural are scarce on the spot, particularly the former, spot holders of which are asking 97s. 6d.; natural is 22s. 6d. to 25s.

MENTHOL is firm, with spot sellers of Kobayashi-Suzuki at 23s. 6d. per lb., and February-April shipment at 23s. c.i.f.

MERCURY.—There has been rather more inquiry for export to India, China, and other Far Eastern destinations, and a fair business is being arranged in that direction, but the home trade demand is still very quiet and mostly confined to 5- to 10-bottle lots. The tone of the market is called firm, although small offers of Italian are coming in from many quarters. Another good quantity of about 700 bottles of Italian is on the way. There has been practically nothing fresh in regard to Spanish, of which it is understood that a fairly heavy stock is held here, and there is naturally some curiosity as to when some of this will come out and at what figures. Meanwhile, the fact deserves notice that offers of Spanish, which had been absent for some weeks past, made their appearance late on Tuesday at £11 15s. per bottle. This presumably refers to second-hand lots. There are plenty of sellers of Italian at £11 10s., and business could probably be done down to about £11 to £11 5s.

NUX VOMICA has an easier tendency, Cochín offering for forward shipment at 32s. per cwt. c.i.f. London.



**OLIVE OIL.**—Finest French edible is offered at 9s. 6d. per gall. ex wharf.

**OPIMUM.**—A Constantinople advice, dated January 31, states that "the sales for the second fortnight of January increased to from 80 to 100 cases at Smyrna and 80 at Constantinople, at about 750 to 800 piastres per oke. All the transactions at Constantinople have been for export to Japan, which country has imported, besides those mentioned in our previous report, 50 cases during the second fortnight. In addition, 50 cases have been purchased in London for the same country. From a well-informed source we are informed that Japan is coming on the Constantinople market with monthly orders of 100 cases. These demands will perceptibly influence the price, especially as arrivals from the interior still remain small, as a result of the political situation. It is noteworthy that the Japanese buyer is not too particular regarding the percentage of morphine, and he does not seek more than 11.5 to 11.75 per cent. The decline in the English rate of exchange is another good reason for maintaining the price."

**PODOPHYLLUM ROOT.**—Spot holders quote 82s. 6d. per cwt.

**SAFFRON** continues to advance both in Spain and on the spot. Finest Valencia qualities are now very scarce, with a limited quantity obtainable at about 78s. 6d. to 80s. per lb., at which business has been done. The lower grades, which were selling a week ago at about 65s., are now worth 72s. 6d.

**SENEGA.**—Our New York cable announces an advance to 80c. per lb.=4s. c.i.f., and at this price it can still be bought on the spot; there is a fair jobbing demand. It is evident that the earlier reports in regard to crop shortage have been confirmed.

**SERPENTARY** is in slight-demand at about 5s. 6d. per lb. on the spot; our New York cable announces an advance to 90c. (=4s. 3d.).

**SHELLAC.**—Although there has been little change, the tendency has remained mostly upward on firm Calcutta advices and the substantial decrease in the London stocks during the past month to about 8,100 cases. Scarcity is thus a feature which threatens to remain in evidence for some time, due to small shipments and the very reduced quantities afloat. Last month's deliveries at 7,753 cases were very heavy and overlapped the landings by about 3,000 cases. American consumption is as large as ever, and there is more shellac wanted for Continental ports. Usual standard TN Orange quality is 325s.; fine second Orange, 355s. to 360s.; superfine, 410s. to 420s.; R11, 400s.; AC cakey, 280s.; GAL, 260s.; IG, 180s. Futures have been steady, the sales including May at 300s. to 305s.

**STARCH PRODUCTS** are steady. Pure English rice crystals offer at £36 per ton; maize starch-powder has sellers at £13 10s. per ton spot. Spot sellers of Dutch farina quote 26s. 6d. per cwt., Danish 26s. spot, and Japanese for shipment afloat is 23s. 9d. per cwt. c.i.f.

**TARAXACUM.**—English is steady at about 65s. per cwt.

**VALERIAN.**—Belgian can be had at about 65s. per cwt. on the spot.

#### Seeds and Spices

**ALMONDS.**—Quiet, with a fair business at firm prices. The alteration in the rate of exchange has affected the price of Italian, and 130s. c.i.f. is asked from Sicily (equal to 140s. landed). Valencia and Jordan are quiet and unchanged. Morocco are not plentiful, and holders are not disposed to accept lower prices.

**CHILLIES.**—At auction fifty-two bales ordinary Zanzibar were bought in at 150s. per cwt.

**CLOVES.**—Zanzibar are easier, spot offering at 1s. 4½d. to 1s. 5d. per lb. To arrive, the sales include February-April shipment at 1s. 1d. to 1s. 2½d. per lb. c.i.f., with sellers at 1s. 3d. Other descriptions are scarce, and the prices asked for Amboyna to arrive are too high for buyers.

**GINGER.**—At auction 113 bags wormy washed rough Cochin were bought in at 58s. Privately Cochin, washed rough, is quoted at 60s. to 65s., and Calicut at 60s.; sound Jamaica is 240s. and Rhatoon 160s.

**MACE.**—At auction 54 packages West Indian offered, and sold at steady rates to 1d. per lb. advance.

**NUTMEGS.**—At auction 391 packages West Indian offered, of which about 200 sold. Sound was chiefly bought in, and defective were about ½d. per lb. lower.

**PEPPER** is easier, with spot sales of fair black Singapore at 3½d. to 4d. Lampong is 4½d., Tellicherry is 4½d. to 4¾d., and Aleppy 4d. per lb., all spot, with business thereat. To arrive, fair Singapore for February-April and March-May shipment have been sold at 3½d. to 3¾d. per lb. c.i.f. d.w. White pepper is also easier, with sales at 7½d. to 7¾d. per lb. for fair Muntok on the spot; for February-April and March-May shipment business has been done at 7½d. c.i.f. d.w. White Singapore on the spot is 7½d., and February-April shipment has sellers at 7½d. c.i.f.

**SEEDS.**—The following are current spot quotations: Spanish ANISE is 77s. 6d. per cwt.; Russian is unchanged at 70s. CANARY SEED is very firm, with Mazagan offering at 80s. to 85s. per quarter; Larache is 70s.; Spanish is 100s.; Tangier, 82s. 6d. to 85s.; and Casablanca, 85s. Morocco CARAWAY is nominal and very scarce at 25s. per cwt., and Dutch is 30s. to 35s. Sound CORIANDER, 28s. 6d.; wormy, 13s. to 23s. as to quality. CUMIN SEED is still scarce at 55s. per cwt. for fair quality. DILL SEED is unobtainable on the spot. FENNEL SEED is 42s. 6d. per cwt. for sound in Liverpool. FENUGREEK SEED is 11s. to 11s. 6d. per cwt., as to quality. Manchurian HEMP SEED is 18s. per cwt. Morocco LINSEED is 24s. per cwt. on spot. Good English yellow MUSTARD SEED is 34s. per cwt.

#### Essential Oils

**CEYLON citronella** continues in good demand and is firm. Lemon is irregularly quoted. Cassia is offered at cheaper rates, but lower prices are not general. American oils are easier. Clove oil is cheaper. Patchouli is dull and slightly lower. The large stocks of aromatic and synthetic chemicals, imported before the Safeguarding of Industries Act came into force, are being slowly liquidated, but prices are, as yet, not nearly stabilised, and spot quotations are generally lower than c.i.f. figures. Coumarin is firm on the spot and vanillin is slightly easier.

**ANISE (STAR).**—"Red Ship" on the spot is dull and unchanged at 2s. per lb.

**BAY.**—West Indian is unchanged at from 14s. 6d. per lb. for 52 per cent. oil, down to 12s. 6d. for lower percentage.

**BERGAMOT.**—For 37-39 l.a. quotations are unchanged at from 20s. 6d. to 21s. 6d. per lb. The c.i.f. price is 19s. to 20s. 6d.

**CAMPHOR.**—White essential is unchanged at 110s. to 115s. per cwt. as to packing.

**CARAWAY** is unchanged on the spot at from 7s. to 7s. 3d. per lb. The last crop was a failure, and the present price is said to be due only to the small demand.

**CASSIA** has been fairly steady at from 4s. 8½d. to 4s. 9d. per lb. for 80 to 85 c.a., but some holders have now dropped their price to 4s. 6d. spot. The price for shipment is 4s. 3d. c.i.f., but bids at 4s. 1½d. would be cabled for acceptance.

**CEDARWOOD** is a shade easier at 1s. 11d. per lb. for drums, and 2s. for cases on the spot.

**CINNAMON.**—Ceylon leaf is unchanged at about 6d. per oz. spot. High percentage is quoted at 9s. 9d. per lb. c.i.f. February-March shipment.

**CITRONELLA.**—Ceylon is firm on the spot at from 1s. 11d. to 2s. per lb., according to seller. For estate, 2s. has been paid and 2s. 1d. is now quoted. Java is unchanged at from 2s. 11d. to 3s. according to quality. Burmese is obtainable at from 2s. 11d. to 3s. 1d. according to seller.

**CLOVE.**—English distilled is easier at 10s. 9d. per lb. spot.

**EUCALYPTUS** continues in fair demand at from 1s. 7d. to 1s. 7½d. per lb. for 70 to 75 per cent. cineol on the spot.

**GERANIUM.**—Bourbon is firm at 23s. per lb. spot. In one direction 22s. would buy. The c.i.f. price is 21s. 6d.

**LEMON.**—Quotations are irregular this week. Some shippers have advanced their c.i.f. prices for no apparent reason, as much as 3s. 5d. being the cabled quotation. Business has been done in other directions at 2s. 8d. c.i.f.



The general shipment price is 3s. to 3s. 2d. c.i.f. Spot sales of certain brands have been made at about 3s. 2d.; there are quotations down to 2s. 9d.

**LEMONGRASS.**—Cochin is quiet at 3d. per oz. spot. Business has been done at 2½d. c.i.f., with sellers again at 2¾d.

**LIME.**—Fair arrivals of new West Indian distilled have been announced. Spot is quoted at 2s. 3d. per lb., but it is doubtful if this figure can be maintained except for small quantities. Sellers meantime are holding out.

**MINT.**—Japanese dementholised Kobayashi-Suzuki is steady at 5s. 3d. per lb. spot and c.i.f. to arrive.

**ORANGE** is unchanged. Sicilian sweet is quoted at 12s. 6d. to 13s. 6d. per lb. spot, and 12s. to 13s. c.i.f. West Indian, sweet, is offered on spot at 10s. to 10s. 6d.

**PALMAROSA.**—Spot is unchanged at 15s. 6d. per lb. for pots.

**PATCHOULI** is dull and a shade easier for Penang at 42s. to 42s. 6d. per lb.

**PEPPERMINT.**—American tin oil is cheaper at 9s. per lb. spot. The continued rise in the American exchange has probably influenced certain spot sales, which have been made at under present replacement values. H.G.H. is lower at 22s. 6d. to 23s.

**SASSAFRAS.**—Genuine natural is quoted at 6s. 6d. per lb. spot.

**TANSY.**—The improvement in sterling is responsible for the cheaper quotation of 37s. per lb. c.i.f. There is very little inquiry.

**WORMSEED.**—American is quoted at about 23s. per lb., but some holders will sell out at 21s.

#### Aromatic and Synthetic Chemicals, etc.

**AMYL SALICYLATE** is quoted variously at from 3s. to 4s. 6d. per lb. **AUBEPINE** has been selling freely at 10s. 6d. per lb.; up to 14s. per lb. is quoted. **BROMSTYROL** is obtainable at from 8s. 9d. to 11s. per lb. **COUMARIN** has been in better demand at from 10s. 6d. to 11s. 6d. per lb. as to seller. **METHYL ANTHRANILATE** ranges from 7s. 6d. to 8s. 6d. per lb. **METHYL SALICYLATE** is quoted at 2s. 1d. to 2s. 3d. per lb. **PHENYL ETHYL ALCOHOL** is obtainable at 20s. for tip-top quality. **SAFROL** is easier at 3s. 2d. to 3s. 3d. per lb. There are still sellers of **TERPINEOL** at 2s. For **VANILLIN** 38s. to 39s. per lb. are current quotations; one holder quotes 37s. 6d. These prices are for spot.

#### Pharmaceutical Chemicals, etc.

THE market at the moment appears to be governed by a pronounced variation in prices. Some prominent holders are maintaining their quotations, and in some cases even advancing them, having in mind the dearer prices for anything to come forward from the Continent. At the same time a number of weak holders seem willing to undercut in order to effect sales; hence a generally unsettled market, but with rather more demand. Makers of morphine salts and strychnine salts have reduced their prices; veratrine is also cheaper. Calcium lactate has a firmer tendency, and citric acid is cheaper. B.P. tannic acid is scarce.

**ACETANILIDE** is offering from about 1s. 3d. to 1s. 5d. per lb., but the demand is small.

**AMIDOPYRIN** on a dull market is not firm at quoted price of about 18s. per lb.

**ASPIRIN** is a market troubled with isolated cheap offers; the average stands at about 3s. per lb.

**BARBITONE** is quoted at 11s. 6d. per lb., but could be got for a shade less—say, 11s.

**BENZONAPHTHOL** holds at 6s. 6d. per lb., with little or no buying.

**BENZALDEHYDE**, free from chlorine, is easier at about 4s. per lb., and dull.

**BENZOIC ACID.**—The average price is about 1s. 9d., or slightly above that of soda.

**BETANAPHTHOL** is unwanted, and the figure of 3s. may be taken as nominal.

**BROMIDES.**—Ammonium remains dull and easy at 10½d. to 11d. per lb. Potassium, crystals and granular, is quoted at 8d. upwards, with some sellers at less. Sodium bromide is fairly well held at about 9½d. per lb.

**CALCIUM LACTATE** has been in very fair demand of late,

and is appreciating in value as the imports, free of duty, become worked off. The lowest price for quantity is 2s. 3d. per lb., but the quality on offer varies considerably, and for a very fine parcel of B.P. up to 2s. 9d. is asked.

**CHLORAL HYDRATE** remains neglected, with offers at 5s. per lb., duty paid.

**CHRYSAROBIN.**—Makers' prices show a slight reduction to 6s. 9d. per lb.

**CITRIC ACID** in some quarters is down to 1s. 11d. per lb., less 5 per cent.

**COCAINE.**—Hydrochloride can still be had at about 10s. 6d. per oz., and 11s. in small lots.

**COLLODION** is easier, pure offering at 5s. 6d., and meth. 1s. 10d.; flexile is 6s., and meth. 2s. 5d. per lb.

**CREAM OF TARTAR** from British makers stands steady at 120s. to 125s. per cwt., according to quantity; a fair demand continues.

**CREOSOTE.**—B.P. varies on quotation from 3s. 3d. to 3s. 6d. per lb.

**CREOSOTE CARBONATE** holds at 10s. 6d. per lb., but is in little demand.

**GUAIACOL CARBONATE** has been slack, and at 11s. 6d. per lb. is not firm.

**HEXAMINE** remains at about 3s. 3d. per lb., with small business only; it cannot be imported at this figure.

**HYDROQUINONE** meets with a small demand, but values have a firmer tendency at 4s. 3d. to 4s. 6d. per lb., as to quantity.

**JALAP RESIN.**—Makers' list prices show a reduction of 1s. per lb. to 24s., powdered being 25s.

**LACTIC ACID.**—The average price of B.P. is about 2s. 6d. per lb. on the spot.

**LEPTANDRIN.**—Makers' prices show a reduction of 6d. per lb., offering at 10s.

**LITHIUM CARBONATE.**—Spot supplies are in fewer hands, with sales at about 11s. 3d. per lb. With the United States exchange moving in favour of this country, new imports should be easier.

**METHYL SULPHONAL** continues but slow, and values are not firm as quoted at 18s. per lb.

**MILK-SUGAR.**—The spot price for finest powder is about 150s. per cwt. Imports have fallen off lately, pending the result of the appeal in regard to the import duty.

**MORPHINE SALTS.**—Makers' prices show a reduction of from 9d. to 11d. per oz., the following being the quotations: Alkaloid cryst., 10s. 7d.; precip., 10s. 4d.; acetate, 8s. 3d.; bromide, 10s. 4d.; hydrochloride, 8s. 3d.; cryst., 8s. 6d.; meconate, 10s. 4d.; sulphate, 8s. 3d.; cryst., 8s. 6d.; neutral tartrate, 10s. 4d. per oz. net.

**PARA-FORMALDEHYDE** is steadier this week at 3s. per lb., but sales are few.

**PARALDEHYDE** remains dull, with values easy at 1s. 8d. upwards per lb.

**PHENACETIN** is very unsettled. Whilst offers from the Continent for forward delivery are in the region of 6s. per lb., some sales on the spot have been made at much below this figure. The average quotation is at about 5s. 3d. per lb.

**PHENAZONE** seems to be a shade firmer at about 7s. 6d. per lb. Some offers are higher. The demand is light. Makers quote 7s. 9d.

**PIPERAZINE** on spot is uncalled for. Quoted unchanged at 4s. per oz.

**POTASSIUM PERMANGANATE.**—B.P. continues to sell at about 9d. to 10d. per lb. for imported.

**RESORCIN** is unchanged but dull at 7s. per lb., with sales at 6s. 9d.

**SALICYLIC ACID** varies, with some holders asking up to 1s. 5d. per lb. There has been only a small demand lately.

**SILVER NITRATE.**—The price for crystals on February 8 was based on a metal price of 34½d. per oz. as follows: In quantities of 25 oz., 2s. 2½d. per oz.; 50 oz., 2s. 2d.; 100 oz., 2s. 1½d.; 250 oz., 2s. 1d.; 500 oz., 2s. 0½d.

**SODIUM BENZOATE**, which declined last week, is now steady but still dull at 1s. 6d. to 1s. 9d. per lb.

**SODIUM DIETHYLBARBITURATE** continues very flat, with quotations at about 18s. to 18s. 6d. per lb. There is a small inquiry at the close.



**SODIUM SALICYLATE.**—Continental makers' forward price holds firm at 2s. 3d. per lb. for B.P. powder, and 2s. 6d. for finest crystals, at which rates business is being done. In secondhands limited quantities on the spot are offered at slightly lower figures.

**STRYCHNINE.**—Makers' prices show a reduction of 6d. per oz., the following being list quotations: Alkaloid cryst., 6s. 6d.; precip., 6s. 5d.; arseniate, 5s. 10d.; bisulphate, 5s. 3d.; hydrochloride, 5s. 9d.; hypophosphite, 7s. 9d.; nitrate, 5s. 8d.; phosphate, 6s. 3d.; sulphate, 5s. 6d. per oz. net.

**SULPHONAL** is being held on a dull market at 15s. 6d. per lb.

**TANNIC ACID.**—Leviss is in good inquiry and somewhat scarce at about 5s. 3d. to 5s. 6d. per lb. on the spot.

**TERPENE HYDRATE** is unchanged on a quiet market at 3s. 6d. per lb.

**THEOBROMINE.**—The pure alkaloid is somewhat irregular, offering at from 15s. to 16s. per lb. as to seller.

**THYMOL** is quoted at 22s. to 23s. per lb.

**VERATRINE.**—Makers' prices show a reduction of about 9d. per oz., the pure alkaloid, hydrochloride, and sulphate offering at 6s. 9d. per oz.

### Heavy Chemicals

*London, February 8.*

THE steadier tone lately noticeable in the market for industrial chemicals continues, and this week, although business has been limited and shows no improvement, values are fairly well held and there is very little change to record. Prussiate of soda stands firm, as does acetic acid.

**ACETIC ACID.**—Spot ex wharf London is quoted firm and in some demand, with stocks limited. 80 per cent. pure is £46; 80 per cent. technical is £45; 98 per cent. glacial is about £50 per ton in casks and demijohns.

**ACETONE** is now quoted at £78 per ton for British Government specification in drums, with little doing.

**ARSENIC** is dull, with best white powdered British at £40 per ton, and some Continental material slightly cheaper on spot.

**ALUM** from British makers for home trade only is steady at £16 per ton delivered.

**BARIUM CHLORIDE.**—British makers are asking £15 per ton in casks. Spot imported material may be a shade cheaper, but there is very little demand.

**BARYTES** continues quite steady and in some little demand at £4 10s. up to £6 10s. according to quality.

**BLANC FIXE** is still at £22 10s. per ton ex wharf London.

**BLEACHING POWDER** (35 to 37 per cent. available chlorine) for home trade only from makers is £14 per ton, packages extra. Spot material about same figure.

**BORAX** from British makers is quoted for all destinations at: Commercial, crystals, £31; powder, £32. B.P., crystals, £35; powder, £36. Extra fine, £37 per ton.

**BORIC ACID**, ex British makers, is unchanged at: Commercial, crystals, £65; powder, £67. B.P., crystals, £75; powder, £79 per ton.

**COPPER SULPHATE.**—The export demand has again quieted down, while the tendency of the market is rather easier in view of the recent sharp break in the price of the metal, which is now some pounds per ton below the lowest of last year, the market having been chiefly affected by the constant rise in the American exchange. Scrap copper being also cheaper, sulphate makers are thus able to produce at lower costs and to have still a fair margin of profit at the lower terms accepted at around £28 per ton for casks, less 5 per cent., f.o.b. Liverpool. Every effort is being made to meet Italian competition.

**FORMALDEHYDE** (40 per cent.) is in small supply on spot and offered at £78 per ton ex wharf London.

**GLAUBER'S SALT.**—Commercial quality in bags is easier at £5 10s. per ton, and lacks demand.

**LEAD ACETATE** on the spot is easier at about: Brown, £35 10s.; white crystals, £42 10s. per ton; British makers quoting lower at: Brown, £33; white, £41 per ton.

**LEAD PRODUCTS.**—There has been so far no further alteration in home makers' prices for red lead, litharge, or white lead, but the demand continues slow at recent

quotations, especially in view of the further slump in the price of the metal, which temporarily dropped below £21 per ton. Export business in these products is extremely poor.

**LITHARGE** on the spot is firm at about £35 per ton for imported.

**LITHOPONE.**—Continental 30 per cent. red seal is steady at £24 to £24 10s. per ton, with occasional demand.

**OXALIC ACID** has been quiet and values stand at 7½d. per lb. ex wharf London.

**POTASSIUM BICHROMATE** on the spot is slack and rather weak at: Yellow, 1s. 2d., and red, 2s. 6d. per lb.; yellow per lb.

**POTASSIUM CARBONATE** is unchanged at £25 per ton for 90 to 92 per cent.

**POTASSIUM CHLORATE** on the spot and from makers is dull, with values unchanged at 5d. per lb.

**POTASSIUM PRUSSATE** from home makers is dearer this week at: Yellow, 1s. 2d.; and red, 2s. 6d. per lb.; yellow on spot, 1s. 1½d. ex wharf London, casks free.

**SALTCAKE** is idle and nominal at £5 to £6 per ton.

**SALTPETRE.**—Imported has shown a steady inquiry, and shippers are now asking an advance of about 5s. per cwt.

**SODA ASH** (58 per cent. light alkali) from makers for home trade only is unchanged at £8 7s. 6d. per ton; spot parcels steady at: London, £10; North, about £9 per ton; the demand is poor.

**SODA CAUSTIC.**—Spot market is somewhat easier and continues quiet: 70 to 72 per cent., £23 10s.; 76 to 77 per cent., £25 10s. ex wharf shipping port, drums free; makers are quoting to home consumers on contract at: 70 to 72 per cent., £22 10s., and 76 to 77 per cent., £24 10s. per ton.

**SODA CRYSTALS** delivered to destination from makers for home trade only are £6 10s. per ton; spot parcels ex stores from £6 10s. to £6 15s. per ton.

**SODIUM BICARBONATE** on the spot is dull, with some small lots about at £11 per ton; makers quote £11 10s. per ton for home trade only.

**SODIUM BICHROMATE** from makers stands at 5½d. per lb.; spot lots are weak at 6d. per lb. American material moving on the Continent at about these figures.

**SODIUM CHLORATE** on spot is from 3¼d. to 3½d. per lb., makers quote 3½d.; the market has been rather dull lately but is steady.

**SODIUM HYPOSULPHITE** on the spot is steady but dull: Pea crystals in 1-cwt. kegs are about £19 10s. per ton; commercial quality, £14; home makers quote photographic at £18 and commercial at £12 10s. for home trade only.

**SODIUM NITRATE** stands at £14 per ton for 96 per cent. refined f.o.r. Liverpool.

**SODIUM PRUSSATE** on the spot stands very firm, with lowest quotations at 9d. per lb., others at 9½d. Home makers are now asking up to 10d. per lb. The demand continues fairly good, with limited stocks only on spot.

**SODIUM SULPHIDE** from makers is unchanged at £22 per ton for 60 to 65 per cent. concentrated in casks. Spot parcels of 60 to 62 per cent. solid in drums are offering at £22, with brown broken in drums at about £24 per ton.

**ZINC OXIDES** from British makers is unchanged: White seal, £41 10s.; green seal, £40; red seal, £37; all f.o.r. makers' works.

**COAL-TAR PRODUCTS, ETC.**—Except that pitch seems to be brightening up and has advanced in price, there is very little change to record in these products. **ANILINE OIL** is steady at 1s. per lb., drums free, but seldom asked for. **ANILINE SALT** is unchanged at 1s. 1d. per lb., casks free, and slack. **DISINFECTANTS** are neglected when offered at 3s. 9d. per gallon. **NAPHTHALENE** is perhaps a shade easier, with the market still dull: Crude, £5 to £9; crystals and powder, £16; flakes, £17; balls, £25; candles and tablets, £35 per ton, packages free. **PITCH** is quoted steady on a firm market at advanced price of 65s. per ton f.o.b. London. **TOLUOL** is unchanged but dull at: Pure, 3s. 2d., and commercial, 2s. 9d. per gallon, in drums. **XYLOL** is almost nominal at: Pure, 4s.; commercial, 3s. per gallon. **SULPHATE OF AMMONIA**, February delivery, 24½ per cent. ammonia, £16 13s.; 25½ per cent. ammonia, £15 10s. per



ton delivered for home trade only. PURE METHYL ALCOHOL steady at £80 per ton, ex wharf London. CARBOLIC ACID crystals are steadier and in some little demand at 5½d. per lb. f.o.b. U.K., drums free. Detached crystals are 7½d. in large bulk packing. CRESYLIC ACID is quoted at: Crude, 1s. 10d.; dark, 95 per cent., 2s. 3d.; pale straw, 97 per cent., 2s. 6d. per gallon, drums extra.

#### Fixed Oils, etc.

LINSEED OIL has advanced on an active market, but it is possibly only a brief fluctuation. Turpentine is not so dear this week, but is firm at the close. Other products are about the same, and have been rather dull. ACID OILS stand fairly steady, with values about the same: Coconut, 34s.; palm-kernel, 34s.; groundnut, 30s. 6d. CASTOR OIL.—Hull mills' prices are unaltered on a slow market: Pharmaceutical, 55s.; first pressings, 50s.; second pressings, 45s.; French medicinal water-white is cheaper at 61s. per cwt., in barrels, ex wharf London. COCONUT OIL.—Values are being maintained, with the market slow but steady: Deodorised, 50s.; Ceylon, 45s.; Cochín, 53s. COTTON-SEED OIL has been dull lately and prices are not so firm: Deodorised, 46s.; common edible, 42s.; soap-making, 39s.; crude, 36s. GROUNDNUT OIL.—Deodorised on spot is steady at 55s., with crude Oriental quoted for shipment at 44s. 6d. c.i.f. LINSEED OIL.—Apart from the good Transatlantic demand, which continues the mainstay of the market, business has not been very lively, but holders, nevertheless, have managed to raise their terms. The course of the market appears to be largely subject to price-movements in the raw material, which have been mostly against crushers, due to light shipments. Raw, naked, on spot, 34s. 6d. to 34s. 9d.; February-April, 33s. 3d. to 33s. 6d.; May-August, 33s. 3d. to 33s. 4½d.; Hull, on spot, raw, naked, 33s. 6d.; February to April, 33s. 6d.; May to August, 33s. PALM-KERNEL OIL has been slack, with prices at the close easy at: Deodorised, 47s.; crude, 40s. 6d. PALM OIL is gradually easing, and has been dull: Lagos, 37s.; softs, 35s.; hards, 30s. RAPE OIL has been quiet, but prices are fairly well maintained: Refined, 57s.; crude, 51s. SOAP STOCK GROUNDNUT is dull, and quoted at about 29s. SOYABEAN OIL has quietened off, and values are not so firm: Deodorised, 45s.; crude Oriental, 35s. 6d., c.i.f. for shipment. TURPENTINE.—The London stocks are admittedly low, but under rather poor industrial conditions deliveries have proved lighter of late, and the market, moreover, having been overshadowed by a big rise in the American exchange, this has had a somewhat restraining effect on the demand. The undertone, all the same, seems steady, while the market has not fluctuated a great deal. Rather stiff prices are being paid in the Northern markets for spot lots, which are scarce. The rise in the exchange has been counteracted by the recent advance in the American market. Spot closes at 70s. 6d. and March-April at 70s. 6d.

ANIMAL AND FISH OILS, TALLOW, ETC.—A decline in values all round is recorded in fish oils. Tallow has brightened up somewhat and are a point dearer. Other products remain unchanged on a slack market. BONE GREASE continues steady, with limited business passing. Pale water, 34s.; brown, 31s.; benzine, 28s. 6d. closes firm. English LARD OIL is dull at 65s. to 74s. per cwt. NEATFOOT OIL is rather scarce on spot at 4s. 4½d. to 5s. per gallon. Pale HORSE OIL is steady at 35s. per cwt. delivered. FISH OILS have been distinctly quiet, and the easier prices, as suggested in last report, are now obtaining. Filtered pale whales, 35s. to 39s.; filtered brown, 29s.; thickened, 38s.; brown whale cake, 18s.; brown stearine, 16s.; refined sperm oil, 39s.; best refined Southern sperm oil, 42s.; seal oil, 24s. to 42s.; water-white seal oil, 45s.; Newfoundland tanked cod oil, 34s. 6d.; English Coast cod, 27s.; thickened fish oil, 37s. 6d.; thickened shark oil, 34s.; hardened whale oil, 39s. to 43s.—in barrels net ex wharf London, slightly cheaper ex provincial ports. Japanese in cases for shipment 21s. 6d. c.i.f. TALLOW has taken a turn for the better, and an improvement all round in values is recorded. At last week's auctions 1,800 lots were sold

out of 2,400 offered at about 1s. advance. Fine mutton, 41s. to 42s.; fine beef, 42s. to 42s. 6d.; good mixed, 39s. 6d.; inferior, 34s.

#### German Chemical and Drug Markets

"No ray of sunshine penetrates the dark clouds at present," is the opening sentence of the market report, dated February 1, of a leading wholesale Hamburg drug-house. "Since the sinister birth of the so-called Peace of Versailles Germany has been discussed at ten Conferences, but the results led to nothing, since their participants have been engaged in tilting at windmills; instead of approaching the problem from an international and economic point of view it was discussed from a national and selfish standpoint. England has at all times conducted a purely English policy, and ignores sentimentality; France is blinded by her intoxication from victory; Germany's mortal sin is her lack of unity, and the exploitation of this fact has led to Germans becoming the coolies of the world."

"For the first time the scene will be altered in Genoa, and the drama bears the title 'World Economic Conference.' New star actors will appear before the footlights, and in the background there will be crowds of supers. Germany is permitted to figure. The overture is being rehearsed, but already a wrong note has been struck by America. The wonderful League of Nations has been debarred from acting as conductor. Will the promptings of the heart be permitted to appear beside the cold logic of the head? Will hatred and illusion be demobilised? Will the long row of cyphers be transformed into tangible figures? The Stock Exchange already vibrates. But merely to loosen pressure does not prevent a helpless individual from dying of asphyxiation. If a universal and uniform aim is not possible, then greater events will solve the world problem, for even the power of tyrants has an end. The political uncertainty of the future and the typical conference spirit are reflected in trade conditions. The export trade in our line has been very brisk, but is declining in the now smaller Germany. The stranglehold of the high cost of living increases the cost of production and expenses. The higher postal rates, which are paralysing business, are to be followed by higher freight charges. The world shipping freight shows a decline, due to the absence of cargoes, but otherwise there are no signs of lower prices, and the price of coal tends to raise the cost of all manufactured goods." The following quotations are in marks per kilo.:

ACETIC ACID.—Glacial (98 to 100 per cent.) is scarce and firm at m.30; for export m.36; 80 per cent. supplies are scarce, and remain firm at m.21; for export m.28.

AMMONIUM CARBONATE.—After being neglected the demand for powder has increased, and it is firmer at m.14; for export m.18. Lumps are scarce at m.20; for export m.25.

BALSAM PERU.—Genuine original is scarce and firm at m.750.

BENZALDEHYDE is neglected at m.55; for export m.70.

BENZOIC ACID and SODIUM BENZOATE have not been in demand, and are quoted m.40; for export sodium benzoate is quoted m.45 and benzoic acid m.55; inferior qualities are offered at m.35.

CAFFEINE (PURE), in spite of slight demand, has advanced to m.1,250; for export m.1,450. Caffeine salts m.1,450.

CITRIC ACID is apparently firmer, and the small stocks are in demand at m.200 for home and export.

COUMARIN has been in slight demand at m.800.

CREAM OF TARTAR (98 to 100 per cent.)—The demand declined after the Christmas trade, but recently it has revived, and the price is firming up owing to scanty supplies. Quoted m.85; for export m.95.

GLYCERIN remains firm at m.70; for export m.80.

HELIOTROPINE.—Only small amounts have been in demand at m.725; for export m.800.

MENTHOL is in regular demand at m.2,300 for orders of a case or more; broken bulk, m.2,400.

MILK-SUGAR.—The milk shortage is the cause of its being firm at m.60; for export m.95. Recently export licences have been difficult to obtain.

SALICYLIC ACID is neglected at m.90; for export m.100.

SODIUM SALICYLATE has been in demand for export at m.130, and is scarce.

TARTARIC ACID has been in brisk demand since the New Year both for home and for export, and the price is advancing. Powder, granular, and crystals is quoted m.90; for export m.100.

VANILLIN.—An advance in price recently made by makers led to an increased sale. Offered under factory price at m.3,000, and for export at m.3,100.





### Registered Druggists' Position

SIR,—I should like to draw the attention of registered druggists in Ireland to the danger of our present position, and to the immediate necessity for organisation to combat that danger. From the debates at the Irish Council meetings it will be seen that our position under the Dangerous Drugs Acts is anything but secure. The conflicting views held by prominent members of the Council leave us in doubt if any powers are left us under the Dangerous Drugs Acts. This anomalous position cannot be allowed to continue. The address of the President of the Chemists' Dental Society shows us what united action has done for dental chemists in securing recognition under the Dentists Act. I am convinced that organisation of the registered druggists in Ireland is even more imperative if we are not to have our rights filched from us. I suggest, therefore, that a meeting of the druggists of Ireland be convened in Belfast in the near future to consider the position, and adopt the best means of safeguarding our interests. If the druggists of Belfast take the initiative in this matter I can assure them that they will have the hearty co-operation and approval of the druggists in every part of Ireland.

Yours sincerely,

AMICUS (6/2).

Wellwisher (6/2) also writes in similar strain.

### Lime-Cream Difficulty

SIR,—In regard to the dispensing difficulty referred to by "E. K." (*C. & D.*, February 4, p. 7), is it possible that your correspondent has misread script, or that prescriber has made a slip? The identical prescription, but with *lin. calcis*, and not *liq. calcis*, is dispensed here very frequently. I was once asked to dispense script as published in the *C. & D.*, but failed. On communicating with prescriber I discovered that he intended the *lin.*, and not the *liq.*

Edinburgh.

Yours faithfully,

JOHN H. LOW.

### Belgian Prescription Problem

SIR,—While not defending the Belgian pharmacist's behaviour in tearing up a prescription presented to him because the previous pricing had been cut off, I cannot help thinking that "Xrayser II." (*C. & D.*, February 4, p. 55) has rather misunderstood the position. It is the practice on the Continent, and in some countries, I believe, compulsory, for the first dispenser to mark the price charged on the prescription so that the cutting out of the price would, in the eyes of a Continental pharmacist, amount to defacement. It must be remembered that pharmacists across the Channel have a professional status, and in all professions there are certain rules of etiquette and procedure to be observed; while the English chemist, being neither good fish nor fowl, is obliged to take note of and humour all the whims and fancies of his customers or he will lose their custom. As a parallel instance to the above case, I remember a lady customer who invariably cut the chemists' stamps off her prescriptions, until some of them resembled jigsaw puzzles in outline, and eventually we had to number them without a stamp, putting the firm's initials in front of the number and inserting the figures into the body of the script so that it was not noticeable. I wonder what our Belgian friend would say to such an undignified way out of the difficulty?

Faithfully yours,

CUT OUT (4/2).

### The Profit on Proprieties

SIR,—The Editor of the "Lightning Dash" is still anxious to prove what a profitable business it is to sell Veno's at 1s. 3d., which costs 12s. 5d. doz. If the chemists are not all merchandisers they know that to get the extra 5 per cent. and 5 per cent. the chemist must invest £100 and sell his window-space, goodwill,

and indirect recommendation at less cost to Veno than hiring sandwich men and bill-posting. It is surprising to find chemists undermining their own businesses to get merely 25 per cent. gross and at most 10 per cent. net. Assuming that a chemist has a territory of 5,000 inhabitants and 1,000 of them want "Lightning" remedies, there are 500 less chances of his getting 500 repeat orders. Only recently the Editor asked us to believe that the retailers were getting the best of the business and the many thousands spent in advertising were for the retailers' benefit. He now asks us to look at the enormous extension of buildings, and promises that, whereas we have been beaten with whips, we shall in future be treated with scorpions. One of the family is known as *Echinacea angustifolia*.

NON-CHARLATAN (4/2).

SIR,—In your issue\* of January 28 there is an advertisement of Owbridge's Lung Tonic which states that "the minimum retail price is the face value." I think it is not out of place to point out that the line in question is not on the protected list of the Proprietary Articles Trade Association, and that no attempt is made to prevent co-operative societies from selling the article at face value less any dividend (or rebate to non-members) they care to distribute.

Therefore the face value is not necessarily the minimum price.—Yours, &c.,

PHARMOPTICO (6/2).

### Tobacco and Influenza

SIR,—During the present influenza epidemic chemists have often been asked whether tobacco smoke kills the influenza microbe, and there is a general assumption by ninety-nine smokers out of a hundred that if they smoke with sufficient depth and regularity they render themselves relatively safe from disease. Tobacco smoke certainly has a destructive effect on germs that have been prepared for laboratory experiments, but the conditions are obviously different when the microbes have established themselves in the mouths of smokers. Some little time ago a professor of the University of Rome carried out some investigations with the object of ascertaining the actual efficiency of tobacco smoke as a disinfectant in the mouth. The result of these experiments was that the strikingly disinfectant power of tobacco smoke in laboratory experiments does not materialise in the mouth of the smoker. It is true that a bactericidal action does follow the consumption of large quantities of tobacco, but it affects only a very few micro-organisms, such as the cholera germ, which do not strongly resist disinfection. So long as the smoker firmly believes that by smoking he is warding off an attack of influenza, he is undoubtedly putting himself in a frame of mind calculated to give him a greater resistance against the onset of the disease. The scientific truth of the matter should not cause the enthusiast to lose faith, or he will be less immune, and, at any rate, there is a highly popular and soothing theory to be found in the advice that

"Those now smoke who never smoked before,

And those who always smoked now smoke the more."

Yours sincerely,

M.D., PH.C. (8/2).

### Meeting Unemployment

SIR,—The great amount of unemployment in the ranks of pharmacy was brought home to me when a young qualified man informed me that he had since last September answered nearly one hundred advertisements for a qualified assistant, and is still without employment. I suggest that there must be some pharmacists in business who, like myself, are unable to provide work for a full-time assistant, but who could, on the other hand, provide two or three days' employment per week for either a qualified or unqualified assistant. If these would get into touch with the unemployed men I am sure that the unemployment could be greatly relieved, as a man would find full-time employment at, say, three pharmacies.

Yours faithfully,

ONE WHO HAS BEEN LUCKY (31/1).



### Local Branches of the Pharmaceutical Society

SIR,—At the various meetings of local associations held during the present winter session, the addresses made by the President and members of the Council seem to have harped continually on one string—namely, the necessity of forming local branches of the Pharmaceutical Society—until we have been served up with reorganisation *ad nauseam*. It seems to the unbiased observer as though they were really alarmed that with the cessation of the so-called trading portion of their activities and the formation of the Retail Pharmacists' Union there would be a complete collapse of the local associations, accompanied by wholesale secessions from the Society; if this is so, it shows that there must be a very uneasy current of reflection on the wasted opportunities of the past, and a belated recognition that pharmacists as a body are not satisfied with the Council's methods. It is, therefore, the more refreshing to turn to such views as were expressed by Mr. F. G. Hines at Sheffield, where he called for a cessation of these reorganisation activities and a concentration of effort on the protection of the qualification, which is gradually being encroached upon year after year. Mr. Hines has always been commendable for the saneness and lucidity of his views, and it is a great pity that he has been unable up to the present to secure more powerful backing in the Council. It is to be hoped that at the next election there will be a larger selection of candidates, so that those of us whose only means of expression is the vote will be enabled to utilise the same. There is no doubt that at the present time the finest opportunity has occurred for the Council to press for the separation of dispensing and prescribing, to the mutual benefit of both public and pharmacists. Cases multiply almost daily, to mention only three incidents prominently before the public recently: the case where it was impossible to state whether pills prescribed contained morphine or opium, as there was no record kept; then the case where a doctor prescribed strychnine in drachms, having mistaken the dose; and now we have another, who was unable to state the amount of arsenic contained in liq. arsen. hydrochlor. What would have been a magistrate's or coroner's comments on a pharmacist who was guilty of such defects? In the case of non-entry of morphine a chemist would now stand a fair chance of imprisonment, and ignorance of the doses of strychnine and arsenic would certainly have nipped his career in the bud at Galen Place. In these days of continual research and ever-widening fields of knowledge the medical student has a struggle to keep abreast of his own profession without dabbling in pharmacy, and one wonders how many examples will be necessary before the Government takes the step which will once and for all preclude the possibility of such incidents and provide proper safeguards and records for all dispensing.

Yours faithfully,

SEPARATIST (19/9).

### Latin Names for Drugs

SIR,—In a recent Police Court case tartaric acid was stated to have been mixed with cream of tartar, which might easily happen with the dog Latin names for chemicals employed in the drug-trade. Potass. tart. acid. pulv., the usual label on drug-house cream of tartar, would easily confuse some junior into thinking the parcel contained acid. tart. Would it not be prudent for wholesalers to drop the Latin name and label it "cream of tartar"? Nothing that the retailer can do will prevent that error unless some experienced assistant seizes that pot. tart. acid. as it comes in, re-labels it boldly and clearly "cream of tartar," obliterates the "pot. tart. acid.," and places the parcel in the cream of tartar bin or box—three jobs of "mak' sure" all because of dog Latin. It is all on the same lines as "hora somni," often taken for "hora omni," which sent one pilgrim "west" before his time in New South Wales. Another old custom is the "cut-down 1 oz." label on  $\frac{1}{2}$ -oz. chip boxes, instead of the actual content. Some houses have altered the label, but others "hug their chains" because their chemist customers prefer the designation.

Yours truly,

JAY MACK.

### Subscribers' Symposium

For interchange of opinion among "C. & D." readers, and brief notes on business and practical topics especially new ideas.

#### Appreciations

There is no doubt as to THE CHEMIST AND DRUGGIST being the finest drug paper in the world (30/1).

The CHEMIST AND DRUGGIST is as indispensable to the pharmacist in business as the air-pipe is to the diver (120/12).

To the busy chemist the C. & D. is indispensable; the literary matter and the advertisements are of great interest and convenience.—L. & S. (27/15).

#### Treatment of Lumbago.

J. M. (93/8) writes: Could any C. & D. reader recommend me anything to relieve lumbago, with which I have been much troubled? I have tried doctors and specialists, but still it comes on periodically.

#### Dispensing Proprietary Galenicals.

Senex (7/2) writes: To save the chemist's time and avoid loss on broken lots of ready-made proprietaries, the makers should, for dispensing purposes, put up retail sizes in plain bottles. The original label could then be soaked off, and the doctor's directions substituted. A quick method of soaking off labels is greatly needed. Dispensers' counters are not all fitted with steam or hot water.

### Legal Queries

Bono (30/1).—We replied to your inquiry in the C. & D., December 10, 1921, p. 77.

J. M. (3/2).—REGISTRATION OF TRADE-MARKS.—See *The Chemist and Druggist Diary*, 1922, p. 277.

Radix (25/1).—A patent-medicine licence must be taken out for the sale of stamped medicines, even if sold from a private house and sent by post.

S. & Co. (3/2).—The position of companies under the Poisons and Pharmacy Act is dealt with in detail in *The Chemist and Druggist Diary*, 1922, p. 234.

O. R. W. (3/1).—No special form or particulars are required when "dangerous" drugs are sold to medical men. The sale must be entered in the Register. The orders need not be in writing.

Lex (6/2).—The conditions to be observed on the sale of arsenic are fully laid down in *The Chemist and Druggist Diary*, 1922, p. 223. The additional precautions to those prescribed by Part I. of the Pharmacy Act, 1868, are there mentioned.

H. & Co. (5/1).—Phosphorus is not a statutory poison in Great Britain, but is included in the Irish Poison Schedule. Cyanogen bromide, being similar in nature to the cyanides, is an active poison, and cannot be described as "safe" for use by the general public.

M. P. (29/2) is taking a lease of a lock-up shop, at an annual rental of £120. He asks what documents he should receive, and what fees he is liable to pay to the landlord's solicitor. ["M. P." will hold the lease signed by the landlord, while the latter will hold a counterpart signed by "M. P." Unless there is a local custom to the contrary, "M. P." must pay the landlord's solicitor £7 10s., and also £1 15s. for the stamps upon the lease and counterpart.]

F. H. H. (6/2).—Of the labels you send, those for "cold and influenza mixture," "bronchitis mixture," and "carmine gripe water" render the preparations to which they are attached liable to medicine-stamp duty. If a reference to a formula published in a standard work is given on the label, you as a chemist can sell the preparations unstamped as "known, admitted, and approved" remedies. We shall not be in a position to register any formulas until the end of the year, when *The Chemist and Druggist Diary*, 1923, is in preparation.



## Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

*G. A. B.* (21/1).—(1) PRESERVING FLOWERS IN WAX.—A solution of paraffin wax in benzene is made and the flowers or ferns immersed in the liquid, or it is used as a spray. (2) DEVELOPER STAINS on the hands are best removed by treating with ferrous sulphate solution, washing, and then applying potassium binoxalate.

*E. B.* (2/2).—SWEATING MIXTURE used as a substitute for sweet spirit of nitre:

Sp. ammon. arom. ... 3iiss.  
Liq. ammon. acet. ... 3ivvss.

Dose: One tablespoonful every four hours.

*Arthritis* (31/1).—(1) The treatment of rheumatoid arthritis by large doses of iodine was introduced into this country through an article by Mr. Tom Bird, M.R.C.S., "Lancet," March 6, 1920. Notes on the dispensing of tr. iodi, French Codex, were given in the *C. & D.*, May 29, 1920, p. 79, and December 25, 1920, p. 89. (2) The best account of the colloidal state is contained in the three Reports on Colloidal Chemistry issued by the Department of Scientific and Industrial Research, and obtainable from the Stationery Office at 2s., 1s. 6d., and 2s. 6d. respectively.

*Ferrum* (31/1).—RASPBERRY VINEGAR is made either with malt vinegar or white vinegar (i.e., either white-wine vinegar or dilute acetic acid). Malt vinegar adds to the colour, which with white vinegar generally needs the addition of a little caramel to deepen it. When made from the fruit 2 lb. of raspberries is required to a pint of vinegar. Another method is to acidulate raspberry-juice with acetic acid and sweeten with plain syrup.

*B. & G.* (2/2).—We do not know the composition of the proprietary food you mention.

*S. K.* (4/2).—TATTOOING PIGMENTS are finely powdered colours such as venetian red, indigo, brown umber, and yellow ochre. These are ground into a smooth paste with water containing a small percentage of glycerin.

*C. L. S.* (1/2).—PRESCRIPTION ABBREVIATIONS.—"P.P.C." are the initial letters of pro potu communi (for an ordinary drink); "P.P.A." is intended for phiala prius agitata (the bottle having been previously shaken). There is no pamphlet giving these abbreviations, but collections of Latin phrases and abbreviations are given in Ince's "Latin Grammar of Pharmacy" and "The Art of Dispensing."

*J. H. Q.* (91/34).—ZINC HYDROXIDE, or oxyhydrate for use in toilet preparations, is made by adding ammonia to a solution of zinc sulphate, being careful not to use excess of ammonia, as the hydroxide is soluble in excess of alkali. The precipitate is separated, and if required in powder form, is dried at a temperature not exceeding 85° C.

*G. S. C.* (1/2).—The reference number you give for the cold and catarrh mixture is incorrect, as the *C. & D.* is not included in the list of reference books, although *The Chemist and Druggist Diary* and "Pharmaceutical Formulas" are:

*L. W., Ltd.* (19/1).—STRAW-HAT VARNISH.—The dull variety of hat varnish is made as follows:

Orange shellac ... 15 parts  
Powdered resin ... 25 parts  
Powdered naphthalene ... 1 part  
Boric acid ... 3 parts  
Spirit ... 60 parts

Dissolve the shellac and resin in the spirit, strain, and add the other ingredients. The various colours are imparted to the varnish by adding aniline dye of the required colour in the proportion of 1 oz. to a gallon. The dye should be previously rubbed smooth with about 8 oz. of the basis.

*Corinium* (2/2).—DESTROYING WORMS ON LAWNS.—The stock solution is:

Mercury perchloride ... 1 lb.  
Hydrochloric acid ... 22 oz.  
Water to ... 1 gal.

Mix a teacupful of this solution with every 10 gallons of water employed in watering the lawn.

*Percentage* (24/1).—Hæmoglobin percentage of 90 for the blood is slightly higher than the figure usually found for fifty-seven years of age. You should not expect to reach 100 per cent., as that is unusual.

*V. S.* (28/1).—PRICE OF MIXTURE.—The price of the prescription you send, worked out on the *C. & D.* system, is as follows:

		d.
Pot. bromid. ...	gr. 80	1.0
Ext. ergot. liq. ...	3j.	17.0
Ext. hydrastis liq. ...	ʒ 80	26.0
Syr. aromat. ...	3i.	9.5
Aq. ad ...	3viii.	1.5
Container ...		4.0
On cost ...		8.0
	5s. 7d.	67.0d.

This prescription, containing ext. ergot. liq. and ext. hydrastis liq., should have taken it out of any flat-rate system charging 2s. for it. We have had several cases where these two ingredients have been much undercharged. The new price for ext. hydrastis liq. brings the selling price of this mixture to 5s. 3d.

*H. J. S.* (3/2).—Particulars of the method of applying for registration under the Dentists Act, 1921, were given in the *C. & D.*, January 28, p. 60, to which you should refer.

*B.P.* (20/1).—The gelatin capsuling preparation to which you refer can be rendered harder by lessening the amount of glycerin and also by increasing the proportion of gelatin, which varies much in physical properties.

*W. B.* (19/1).—INDIAN BRANDY is used as a stomachic and for diarrhoea in doses of one to two teaspoonfuls. If the preparation is recommended for any ailment, or proprietary rights are claimed, it must be stamped unless the seller (if he is a chemist, for example) is entitled to sell it as a "known, admitted, and approved" remedy, in which case the P.F. reference must be quoted on the label.

## Retrospect of Fifty Years Ago

Reprinted from "The Chemist and Druggist," February 15, 1872.

### The Chicago Fire

As contrasted with the other great fires of history, that of Chicago, in the gross value of property consumed and the area devastated, is beyond question the most overwhelming that ever overtook a city. There are 2,500 acres burnt over. Twenty thousand buildings have been destroyed and 100,000 people have been turned into the streets and thrown out of employment. A list of leading business houses destroyed in the conflagration filled four columns of the "Tribune," small print. This list does not embrace 5,000 houses doing a partially wholesale business, and the long array of retail establishments. The ruins of Herculaneum and Pompeii could but inadequately represent this sudden overwhelming calamity. . . . To us, personally, one of the saddest things connected with the late fire, and peculiarly unfortunate as bearing on the interests of the science of pharmacy in the West, is the total loss of property belonging to the Chicago College of Pharmacy. This loss includes, of course, all its valuable furniture and appliances, apparatus, and library—the most complete in chemistry and pharmacy to be found in the West—and a large and valuable cabinet, the labour of many years in selecting and accumulating. We are happy, however, to announce that, notwithstanding this severe loss, which involves the present suspension of the course of lectures, the energy and devotion of the members of the College are equal to the emergency, and that they contemplate the reinauguration of the school by next season.



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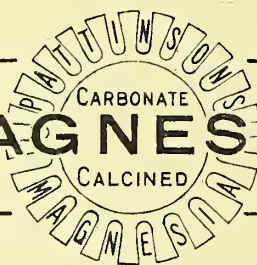
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# Clarke's Blood Mixture and Other Preparations

## WHOLESALE PRICES.

	Sizes	Price per dozen
Clarke's Blood Mixture ....	3/- & 12/-	£1-7-0 & £5-8-0
„ Miraculous Salve ....	1/3, 3/- & 5/-	11/-, £1-7-0 & £2-4-6
„ Special Aperient Pills	1/3, 3/- & 5/-	11/-, £1-7-0 & £2-4-6
„ Patent Skin Lotion....	1/3	11/-
„ Medicated Soap ....	1/-	9/-

Orders : Minimum quantity **£16-4-0** value. Carriage paid upon orders of **£100**.

**Minimum Retail** { Face Value 1/-, 1/3, 3/-, 5/-, and 12/-, giving a profit of **33½ %** on cost to  
**Selling Prices** { Distributors. An attractive Showcard forwarded on application. Sole Proprietors :

**THE LINCOLN & MIDLAND COUNTIES DRUG COMPANY, LIMITED**  
**Park Street, LINCOLN.**

## Generous Profits

are assured to the Pharmacist  
who stocks these popular products.

### Kay's 'LINSEED COMPOUND'

Compound Essence of Linseed

### Kay's MOUNTAIN FLAX PILLS

'Linum Catharticum'

### 'Kay's TIC PILLS'

### 'Kay's THROAT LOZENGES'

Purchased in convenient quantities  
from any Wholesaler they carry  
a clear protected (P.A.T.A.) 25 %  
on turnover (33½ % on cost). Their  
real merit—backed by shrewd adver-  
tising—ensures a steady ever-  
growing sale.

Sole Proprietors :

**KAY BROTHERS LTD.**  
**STOCKPORT**



### THE GREAT FLESH BUILDER.

A LARGE and continuous advertising  
campaign has now been launched in  
connection with this popular tonic and  
flesh-building treatment, and the demand is  
rapidly increasing.

IRVONA is obtainable from all the usual  
wholesale houses, or direct, at the following  
prices :

3/- size, 27/- per dozen  
15/- „ 135/- „

IRVONA is on the P.A.T.A. list and gives  
you the full profit of 25 % on the retail price.

*Pamphlets for distribution and Show-  
cards will be sent on application.*

## P. J. WILLIAMS

Chiswell Chambers, 27 Finsbury Street,  
**LONDON - - E.C. 2**



# Licoricine

ACTS LIKE MAGIC

*Sells freely and readily.*

	Size.	Per doz.
<b>Licoricine</b>	<b>10<math>\frac{1}{2}</math>d.</b>	<b>8/6</b>
"RED BOTTLE"	<b>1/3</b>	<b>12/3</b>
or		
ST. PETER'S OIL."	<b>3/-</b>	<b>27/-</b>



"No case too bad!"  
Trade Mark.  
ESTABLISHED 1854.

5% Discount 30 days, on orders of £6.

Licoricine is a popular remedy for  
Coughs and Colds wherever introduced.

Now is the time to get in your stock.

## MANDALL & Co., LTD.

Tower Works, NEWCASTLE-ON-TYNE

National Telephone: 143 Central.

SYRUP

# ROBORANS

(ROBERTS)

Recognised by the Medical Profession as

## THE BEST TONIC.

Supplied in 8-oz. and 16-oz. Bottles by all the  
Wholesale Houses.

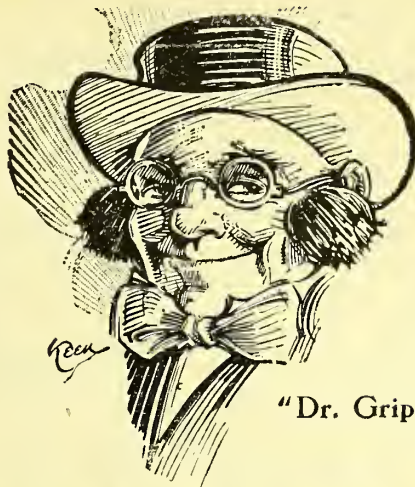
*Inquiries Invited for*  
**NEW & RARE  
MEDICINES**

*of French, Italian and Russian Origin.*

## ROBERTS & CO.,

76 New Bond Street,  
London, W.

5 Rue de la Paix,  
Paris.



"Dr. Grip."

# GRIPS

## First-aid Pastilles.

A paying proposition  
that will keep your  
Cash Register ticking  
"Tenpences" all day  
long.

Write now for particulars of the  
NATIONAL Advertising Campaign  
and liberal Trade Terms. Write  
on Business Heading.

*Distributors to the Wholesale  
and Retail Chemist Trades.*

## Thos. Christy & Co.

4-12 Old Swan Lane,  
LONDON, E.C. 4

**POISONS and PHARMACY ACT.**

Privy Council Order, Jan. 1, 1921.

**DANGEROUS DRUGS ACT, 1920.**

Regulations of May 20, 1921. (Operative Sept. 1, 1921.)

**Dr. J. Collis Browne's  
CHLORODYNE**

is not affected by above Order or Regulations.

**It does not require purchaser's signature.****Proprietors: J. T. DAVENPORT, Ltd., 117 Union Street, S.E.1.****"RED BAND"  
Bismuthated Magnesia**

BOTTLES

**1/3**

COST

**8/- doz.****Bonus**

PROFIT

**100%**

ON COST

NEW SIZES.

Our splendid formula in the heavier  
magnesia, plain or peppermint sweetened.Packed in 1-doz. or ½-doz. Show Boxes  
(Peppermint sweetened sent unless otherwise specified).All orders for 6 dozen and over,  
one size or mixed, will receive a  
bonus of 1 bottle with each dozen.**BUY YOUR BISMUTHATED MAGNESIA  
FROM THE SPECIALISTS IN THIS LINE**

Carriage paid on 30/-

BOTTLES

**2/3**

COST

**15/- doz.****Bonus**

PROFIT

**100%**

ON COST

**The "Red Band" Chemical Co., Richmond Terrace, Edinburgh.**



# **Special New Year Offer.**

## **Woodward's "Gripe Water"**

### **Window Display Terms to Retail Pharmacists.**

From the 1st January, W. WOODWARD (1920) LTD., will, in respect of the first gross of any order from a Pharmacist for "Gripe Water," send 13 doz. bottles for the price of 12 doz. viz., £7 NETT, carriage paid in free case, with

#### **AN ATTRACTIVE SET OUT FOR A WINDOW DISPLAY**

This Display shall be in a central position of the window and for not less than two weeks. This offer will be renewed during 1922 with **EVERY ALTERNATE GROSS** ordered by the Pharmacist.

Pharmacists willing to give the Display should mark their orders "on Window Display Terms" and sign the form of contract-note which will be sent them on receipt of their orders.

Such orders may be placed with the Pharmacist's usual Wholesaler or direct with us.

These special terms will hold good throughout the year 1922.

**W. WOODWARD (1920) LTD.,**  
**79/87, FORTRESS ROAD, LONDON, N.W. 5.**

*Pharmacists will please note that Woodward's Fixed Terms for Great Britain from 1st January, 1922, are:—*

**£7 NETT PER GROSS, CARRIAGE PAID, AND CASES FREE**

*In Ireland applications for Window Display must be made direct to our Agents:—*

**Messrs. JOHNSON BROTHERS of Ireland.**

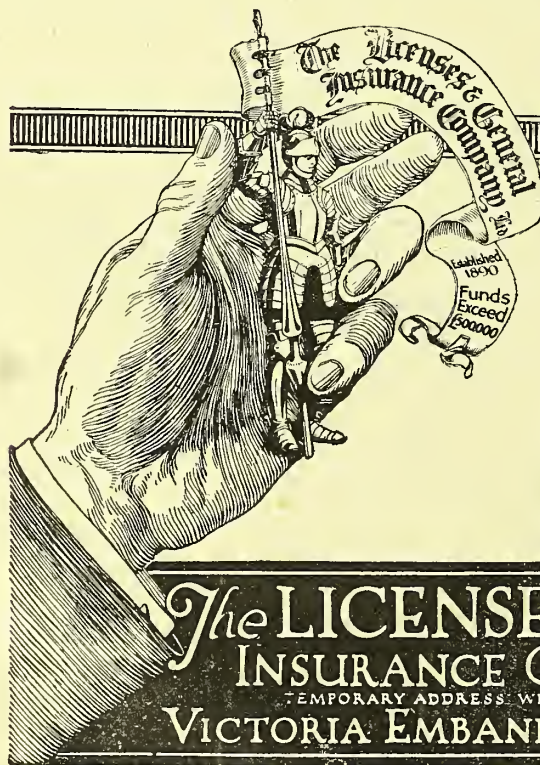
# Francis F. Fox & Co. : Bristol

**LINSEED OIL.                      TURPENTINE.**  
**FINE OLIVE OILS.**  
**LIQUID PARAFFIN.    CASTOR OIL.**  
**CHEMICALS.                      DRYSALTERY.**  
**PETROLEUM JELLY.**  
**CRUSHED LINSEED.**

PRICES ON APPLICATION.

TELEGRAMS—  
"FOX BRISTOL."

TELEPHONE—  
19 BRISTOL



## The Sign of Security

AND

THE FINEST PROTECTION EXTANT

IS

**THE CHEMISTS'  
COMPREHENSIVE POLICY**

ECONOMICAL  
BENEFICIAL  
UP-TO-DATE

**ONE** POLICY  
PREMIUM  
RENEWAL

**The LICENSES and GENERAL  
INSURANCE COMPANY LIMITED**  
TEMPORARY ADDRESS: WHILST REBUILDING—TEMPLE STATION.  
**VICTORIA EMBANKMENT, LONDON, W.C.2**



We invite your enquiries  
for—

# OILS

including

**MINERAL & LUBRICATING  
OILS OF ALL KINDS.**

**ARACHIS NUT OIL**

**CASTOR OIL**

**COTTON OIL**

**COD LIVER OIL**

**COLZA OIL**

**LINSEED OIL**

**NEATSFOOT OIL**

**OLIVE OIL**

**PARAFFIN LIQUIDUM**

**PETROLEUM JELLY**

**ROSIN**

**SPERM OIL**

**SOYA BEAN OIL**

**TURPENTINE**

**WHITE OILS**

FINEST B.P.

CONTINENTAL & ENGLISH B.P.  
TECHNICAL.

EDIBLE REFINED.

FINEST NORWEGIAN NON-  
FREEZING.

GENUINE CATTLE QUALITY.  
GENUINE & BURNING  
QUALITIES.

GENUINE BOILED, PALE-  
BOILED & RAW.

FINEST ACIDLESS.

EDIBLE & PHARMACEUTICAL  
B.P. INDUSTRIAL.

'880 & '870 B.P.

WHITE & YELLOW B.P.  
TECHNICAL RED & GREEN.

ALL GRADES, FRENCH &  
AMERICAN.

FINEST PALE COLOURED.

FINEST EDIBLE.

GENUINE AMERICAN SPIRITS  
AND SUBSTITUTES.

TECHNICAL QUALITIES.

**JAMES ARNOTT & SONS, LTD.,**

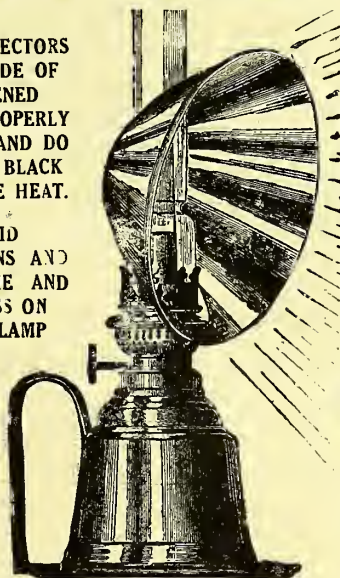
Head Office : 47 PILGRIM STREET, NEWCASTLE-ON-TYNE.

## GUY'S HOSPITAL PARABOLIC REFLECTOR LAMP

*Used in Guy's Hospital for the past 20 years.*

OUR REFLECTORS  
ARE MADE OF  
HARDENED  
METAL PROPERLY  
PLATED, AND DO  
NOT GO BLACK  
WITH THE HEAT.

AVOID  
IMITATIONS AND  
SEE NAME AND  
ADDRESS ON  
EVERY LAMP



All  
Nickel  
Plated.

SENT  
POST  
PAID TO  
ANY  
ADDRESS  
IN GT.  
BRITAIN.

**9/6**

*If abroad  
postage  
extra.*

To Chemists, Practitioners and others in the country and  
abroad where gas or electric light are not available THIS  
LAMP is of thoroughly practical use.

*Send for particulars—*

**J. BRUCE,** 232 Borough High St.,  
London, S.E. 1,  
And LANT STREET

## Pure American Turpentine



*Langley-Smith & Co.*  
14/20 St. Mary Axe, London, E.C.3

Telegrams : "Tallowdom London."  
Telephone : - Avenue 382.

*Enquiries solicited for all Grades of O.I.*







# LIQUID PARAFFIN B.P. 1914

EXCLUSIVELY REFINED FROM

## RUSSIAN CRUDES.

ALL GRAVITIES.

HIGHEST VISCOSITIES.

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## "JASMINE BRAND" PETROLEUM JELLIES B.P.

White and Yellow Tasteless and Odourless.  
Natural Filtered and Opaque.

## "JASMINE BRAND" WHITE OILS

Chem. Pure, Water-White,  
Tasteless, Odourless.

FOR MANUFACTURING PURPOSES.

## LUBRICATING OILS

FOR ALL PURPOSES.

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*All Our Products are Guaranteed of Finest  
Qualities and Our Prices are Competitive.*

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## THE PURE RUSSIAN LIQUID PARAFFIN CO., LIMITED

3 ST. HELEN'S PLACE, LONDON, E.C.3.

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*Actual Refiners and Manufacturers at their Works near London.*

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# Maltoline

TRADE MARK

For those unable to take Cod Liver Oil  
Prices 3/- and 5/6 (P.A.T.A.)

**THE MALTINE MFG. CO., LTD.**  
9 HOLBORN VIADUCT, LONDON, E.C. 1.

## ATKINSON & BARKER'S INFANTS' PRESERVATIVE

THE BEST AND SAFEST INFANTS  
MEDICINE OF OVER 120 YEARS' STANDING.

Prices and Terms on application to R. BARKER & SON, Ltd.  
13 Wesley St., C.-on-M., MANCHESTER.

**DOES  
NOT  
CONTAIN  
any  
SCHEDULED  
POISON.**

# Gelatines

Fine Leaf Gelatine, Pure Calf.

"Albion" Brand (In 1-lb. Packets,  
112 × 1-lb. to Case)

Made in England.

FINE CRYSTAL GELATINES.  
PURE SKIN GELATINES.  
POWDERED GELATINES.

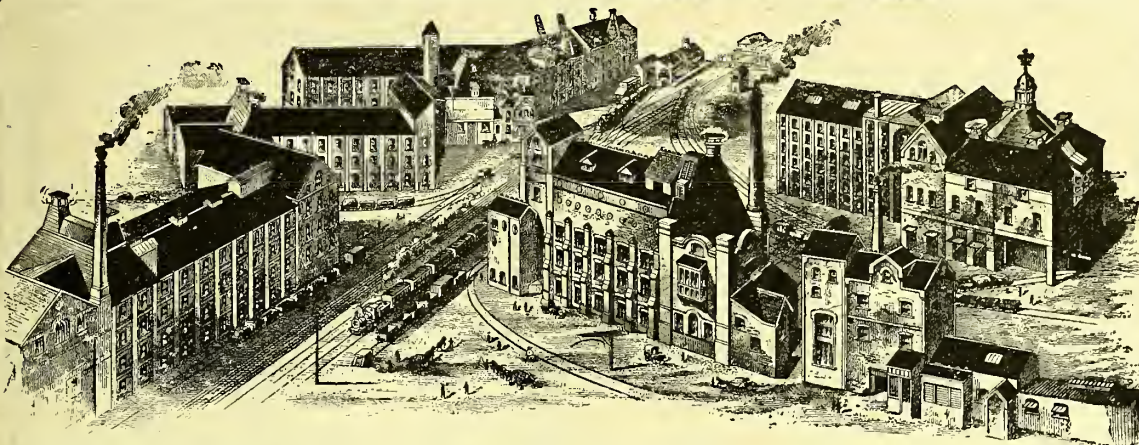
Samples on Application.

**OURY, MILLAR & CO.** 9 MINCING LANE,  
LONDON, E.C. 3.

Telegrams: "Olmenth London."

Telephone: Avenue 4978.





**SPECIALIZING.**—The above Maltings, Malt Extract Manufactories and Laboratory of **H. A. & D. TAYLOR, Ltd.**, and the **BRITISH DIAMALT CO., SAWBRIDGEWORTH**, specialize in the manufacture of high-class Malt Extract Products. The leading Manufacturers of Malt Extract with Cod Liver Oil. Packed in Jars, Tins, etc., to meet clients' requirements.

*Prices, Specimen Labels, Showcards, etc., on request.*

**H. A. & D. TAYLOR LTD.,** PROPRIETORS  
OF  
**THE BRITISH DIAMALT COMPANY,**

CITY OFFICE: 9 HOLBORN VIADUCT, LONDON, E.C. 1.

Phone: City 1765. Telegrams: "Nutrimalt, Cent. London."

LIVERPOOL OFFICE: ARCADE BUILDINGS, 9 LORD STREET.

Phone: Bank 3489.

LABORATORY AND WORKS: SAWBRIDGEWORTH, HERTFORDSHIRE.

Also at BURY ST. EDMUNDS, BISHOP'S STORTFORD, NEWMARKET, etc.

# VITMAR

*The new vitalising food  
proved to contain the  
three principal vitamins*

YOUR WHOLESALEERS CAN SUPPLY YOU

Manufacturers: *Food Specialists,*  
**CALLARD & CO., 74 Regent St., LONDON, W. 1.**

# Vinum Xericum

BUTTS.	HOGSHEADS.	QR. CASKS.
108 galls.	54 galls.	27 galls.

Grade A. STRENGTH 16°-17° Abs. Alc.

Grade B. „ 18°-19° Abs. Alc.

## James V. Oldham

19 St. Dunstan's Hill, London, E.C.3.

Telephone: Avenue 3013.

SPECIALLY INTRODUCED at the REQUEST OF THE MEDICAL FACULTY

MALTED  
**Fry's Cocoa**

CONSTANTLY RECOMMENDED BY THE MEDICAL PROFESSION AND PRESS



Phone :  
138 Pendleton.

Telegrams :  
"Champagne Manchester."  
ESTABLISHED 1855.

# VIN FERRI CITRATIS, B.P.

## Liebig's Beef & Malt Wine

## ENGLISH PORT STYLE.

*British and Foreign  
Wines of all varieties  
In Bottles and Casks.*

Carriage paid on 3 dozen orders and upwards.

### B. ROBINSON & Co., Ltd.

PENDLETON - MANCHESTER.

— WRITE FOR LOWEST 1922 PRICES. —

Dr. HALE'S  
**VIN-SANGUIS**  
WINE FOR THE BLOOD

## Fountain of Health

If you have a  
Wine License we  
will pay the fee.

If not, get one,  
we will pay  
license.

Send for any

You agree to display  
"Vin Sanguis" always.  
You give us an  
agreed initial order.  
You always keep stock

for further particulars



PROPRIETORS OF  
DR. HALE'S VIN-SANGUIS

**Transcontinental Agencies Ltd.**  
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# WINGARNIS

## Sells readily ALL the time

COLEMAN & CO., Wincarnis Works, NORWICH.

### IMPORTANT NOTE

### TO CHEMISTS

### WITHOUT LICENCES

It has been established  
by law that Registered  
Chemists may sell  
"Wincarnis with  
Quinine" without a  
licence.



**VITAMOGEN** contains the essential  
Vitamines in an active and concentrated form. **VITAMOGEN** is in itself a food of the highest potency, rationally concentrated according to approved scientific methods. It is rich in organic, i.e. assimilable Phosphorus, and the proportion of nutritive constituents is well balanced to meet the physiological needs of the organism. **VITAMOGEN** stands alone as a means of supplying the Vitamines—an entirely new food element. **VITAMOGEN** is packed in two sizes, 2/9 and 5/9, obtainable from all the principal wholesale houses. Literature on **VITAMINES** will be sent on application to—Dept. C.

24/26 HOLBORN,  
LONDON. E.C.1

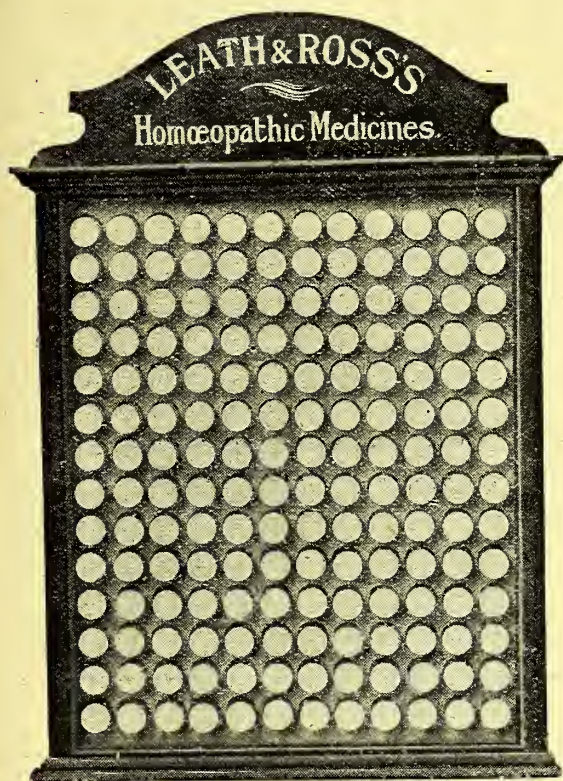
**Vitamogen**  
LTD.



# "Necessity knows no Law"

Therefore you must have one of these handsome Showcases in your Pharmacy, because

## They are a real Necessity.



Dimensions of the Case, Height (Including Scroll) 26 in.  
Width 19 "  
Depth 6 "

We supply them on the following most advantageous terms, viz. :

	£	s.	d.
2 gross 1/- assorted Pilules and Tinctures, @ 4/6 per doz.	5	8	0
Half cost of Showcase costing £3 ...	1	10	0
	6	18	0
10% monthly a/c	13	10	
	£6	4	2

Or Cash with Order

**£6 net.**

You can choose your own medicines, or leave the selection to us. We should send the best selling lines only, and agree to exchange any within twelve months, **FREE OF CHARGE.**

Mr. HAROLD HAW, M.P.S., 5 Albert Terrace, Blackpool, writes: "SIRS—Showcase to hand safely; very satisfactory; has already been admired by several chemist friends."

September 13, 1921.

## LEATH & ROSS, Homoeopathic Chemists,

(Qualified by Examination)

295 High Road, Brondesbury, LONDON, N.W. 6.



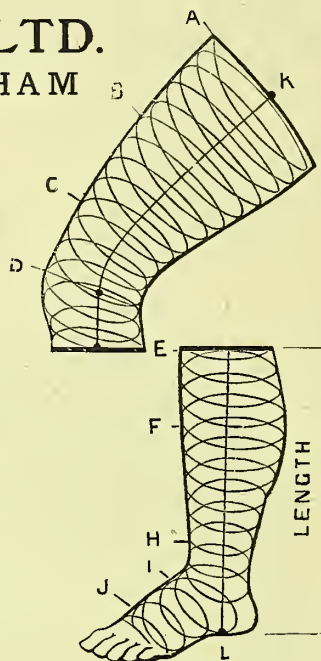
*The*  
**SURGICAL HOSIERY CO. LTD.**  
RUSSELL STREET, NOTTINGHAM

Manufacturers and Patentees of the

**SURCO** *Brand* **SEAMLESS  
ELASTIC HOSIERY**

*The Brand of Quality*

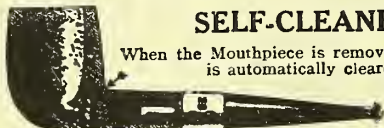
Stockings: Knee Caps: Anklets: Leggings:  
Thigh Pieces: Elbow Caps: Wristlets:  
Mittens, etc., in Stout or Fine Qualities,  
Silk or Thread. Price Lists on application.  
Made in Stock Sizes or to Measure.  
Special articles to measure made and  
dispatched in 48 hours.



**DOWELL'S PATENT  
HEALTH PIPES.**

**SELF-CLEANER.**

When the Mouthpiece is removed all foulness  
is automatically cleared.



Assorted Shapes and Sizes to sell at 3/6 each.

Send postcard for sample dozen.

**HARWOOD BROTHERS**

Est. 1898. Manufacturers of Briar Pipes and Smokers' Articles,  
8/20 Richmond Street, LIVERPOOL.

**BUY DIRECT**

**ELARCO RUBBER GOODS**

The LONDON RUBBER CO. 183 Aldersgate Street,  
LONDON, E.C.1.

For GUARANTEED

**ATOMIZERS and SPRAYS**

THE DEVILBISS Co., LIMITED  
WEST DRAYTON, MIDDLESEX.

**Glass Bottles**

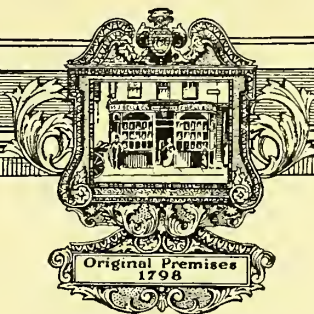
of every type  
in stock.

*Flats, Panels, Rounds, Kalis, Pomades,  
Vials, Boat-shape Feeders, etc.*

SEND US YOUR ENQUIRIES. WHOLESALE ONLY.

**E. DUNCAN DORING** 7 King St., Cheapside, London, E.C. 2  
Telegrams: "Doringlaso, Phone, London." Phone: City 4000.





# The "MARYLEBONE"

## STERILIZED

# ACCOUCHEMENT OUTFITS.

These Outfits contain sufficient dressings, etc., for the accouchement.

THE "MARYLEBONE" OUTFITS are always "GOOD STOCK" as the contents cannot deteriorate or become soiled, and sterility is maintained.

### Retail Prices :

No. 1 Outfit

**31/6**

No. 2 Outfit

**63/-**

*Trade Terms and descriptive literature on application.*

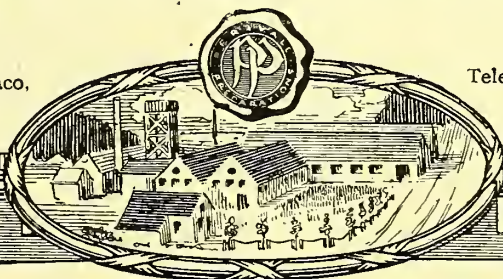
IT WILL PAY the Pharmacist to hold stocks of these outfits. A large demand is being created by means of an intensive Press campaign.

## JOHN BELL & CROYDEN, Ltd.

50 Wigmore Street, LONDON, W. 1.

Telegrams : "Croybelaco,  
Wesdo, London."

Telephone: Mayfair 5015  
(4 lines.)





SUPPORT HOME  
INDUSTRIES.

SPECIFY ROBINSON'S  
**CHEPETTE  
BOXES**

when ordering from your  
Wholesale House.

✱

Both quality and appearance  
are superior to the poor grade  
Willow Boxes of German and  
Austrian make.

✱

Deliveries are prompt and  
reliable.

✱

Prices have been reduced and  
the good quality maintained.

**ROBINSON & SONS, LTD.**

CARDBOARD BOX MANUFACTURERS,

~ CHESTERFIELD.

# EMBOSSSED SEAL LABELS

COMPLETE THE  
PACKAGE AND  
MAKE A GOOD  
ADVERTISEMENT.

Samples from

**JAMES TOWNSEND & SONS,  
EXETER.**

LONDON OFFICE—  
54, FARRINGTON STREET, E.C. 4.

## GREAT SAVING IN PURCHASING

Phone :  
Museum  
4209.

**I. ISAACS & CO.'s**

Telegrams :  
"Isaglasbot,"  
Kinross,  
London.

WELL-KNOWN

## DISPENSING BOTTLES

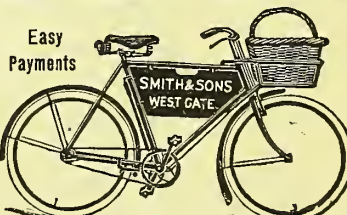
VIALS AND BLUE POISONS.

**GREATLY REDUCED PRICES.**

*Sent Carriage Paid.*

THE NORTH LONDON GLASS BOTTLE WORKS.  
*Head Office*—106 Midland Road, LONDON, N.W. 1.  
Stores—Midland Railway Goods Depot, St. Pancras. Estab. 100 years.

The finest investment you can have, for the  
advertisement is worth the cost of the bicycle.



Easy  
Payments

DUNLOP  
TYRES

TWO STRONG  
BRAKES

WHEELS  
26 x 1 3/4

WRITE FOR LIST

**MOHAWK CYCLE CO., LTD.,**

857 ALEXANDRA ROAD, HORNSEY, N.



# OILED SURGICAL COTTONS OILED SURGICAL SILKS

**EDWARD MACBEAN & Co., Ltd.**

Manufacturers of Oil-proofed and Rubber-proofed Cloths  
of every description.

London Office—6 & 8 Lime Street Square, E.C. 3.  
123-125 Howard Street - GLASGOW.

Telegrams:  
"Diamond, Glasgow."  
"Stormproof, Led, London."  
Codes: Lieber's 5-Letter, A B C (5th Edition), and Marconi.

Telephones:  
8387 Central.  
1915 Central.



## Dr. SCHOLL'S TOE FLEX

corrects bunions and restores the  
normal position of the joint by  
straightening the crooked toe.  
Made of finest surgical rubber.  
Three sizes. Price 2/- each.

**Dr. Scholl's**  
*Foot Comfort Appliances*

enable you to give instant relief and permanent correction to every type  
of foot trouble. They are nationally advertised and medically  
endorsed. You will increase your profits and custom by selling them.

Write to-day for full particulars.

THE SCHOLL MFG. CO., LTD., 1-4 Giltspur St., London, E.C. 1.

# GETS-IT

(The World-Famous Corn Remover.)

"Gets-It" is a liquid which  
dries at once when applied to  
corns or calluses with the  
glass applicator that accom-  
panies each bottle. Stops  
pain at once and soon loosens  
the corn or callus so that it  
can be lifted right off.

Used by Many Millions  
throughout the balance of the  
world, and certain of enthu-  
siastic reception here.

Now Distributed in Great Britain through

**THOMAS CHRISTY & CO.**

4, 10 & 12 Old Swan Lane, Upper Thames St., London, E.C.4.

Manufactured by E. LAWRENCE & CO., Chicago, U.S.A.

# J. H. HAYWOOD, LTD.

CASTLE GATE,  
NOTTINGHAM.

INVENTORS  
OF  
SEAMLESS  
ELASTIC  
HOSIERY.

SURGICAL APPLIANCE  
MANUFACTURERS.



*Specialities:*

Abdominal Belts,  
Trusses,  
Suspensory Bandages,  
Braces,  
Elastic Web Bandages,  
and Druggists' Sundries.

WRITE FOR PRICE LIST.

ESTABLISHED 1833.

TELEGRAMS: "APPLIANCE NOTTINGHAM."

# "BEATSON'S"

A. D.  
1751



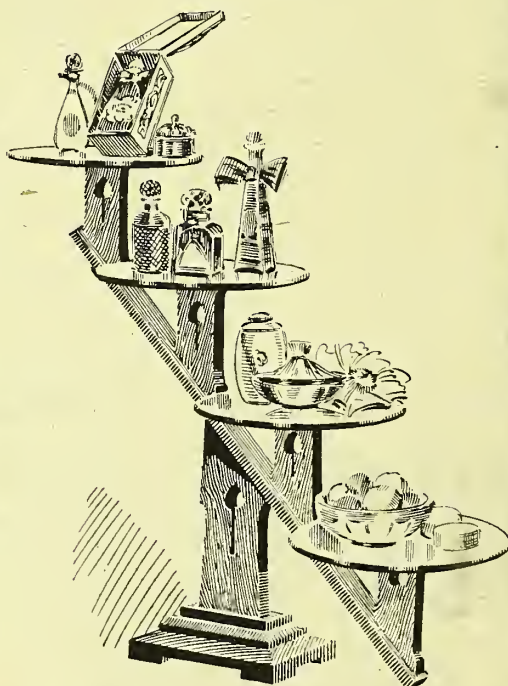
*The House  
for  
Chemists' Bottles*



**BEATSON, CLARK & CO.**  
LTD.  
GLASSWORKS,  
ROTHERHAM.

## DISPLAY STANDS

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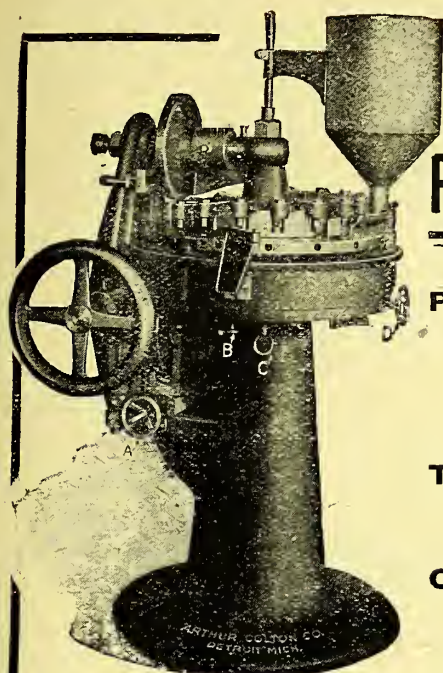
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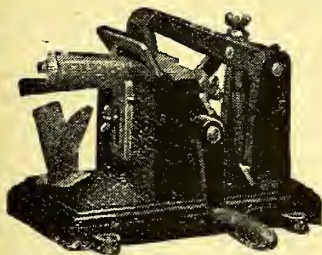
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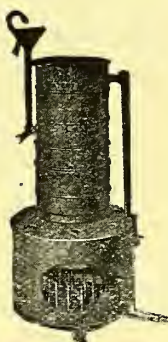
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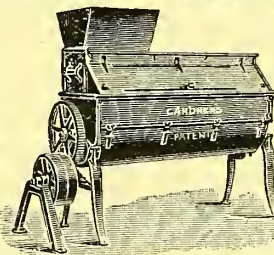
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42 CANNON ST.  
LONDON E.C.4

FEBRUARY 11, 1922

*This Supplement is inserted in every copy of The Chemist & Druggist.*

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The clerical work in connection with the posting of spare copies of the Coloured Supplement week by week has increased to such an extent that we have been compelled to reorganise our system of distribution. Our readers will please note, therefore, that, in future, instructions can be accepted for not more than six successive issues of the Supplement at a time, and that in every case

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**LONDON, N.**—Wanted, a qualified Managing Assistant for Middle-class brisk trade; must be energetic and good Salesman; London district applicants only. Apply, with full particulars and copy of references, to 129/35, Office of this Paper.

**MIDLANDS.**—Smart, energetic, qualified gentleman to manage City business. State salary and particulars to 131/20, Office of this Paper.

**OXFORD.**—Junior required for Retail Oil and Colour business; permanency; state age and salary required. Apply 129/8, Office of this Paper.

**PETERSFIELD.**—Wanted, Male Assistant, qualified or unqualified, well up in Dispensing, Counter, Window-dressing, Developing, and Printing; one other kept. Apply, with full usual particulars, enclosing photo, to be returned. Applicants not answered in three days respectfully declined. Allen, Chemist.

**SOMERSET.**—Really enthusiastic, gentlemanly, qualified Assistant required to co-operate with principal in developing a good-class business with large scope; permanency; moderate salary to commence, increasing with development of business; would wait for suitable man till disengaged. Full particulars, experience, salary, 130/40, Office of this Paper.

**SOUTHAMPTON.**—Qualified Assistant needed; must be a good Counterman, used to Dispensing and Photography. Full particulars in first letter to Wm. J. Fisk (Johns & Son), Tram Junction, Southampton.

**SOUTH WALES.**—Qualified Assistant required for business situate not far from Cardiff; single preferred; must be good Dispenser and Window-dresser; state age and salary required. Apply 130/33, Office of this Paper.

**STAFFORD.**—Wanted, Junior Assistant, well up in Dispensing. Apply, giving full particulars, salary required, and photo, to Fowke & Son, Chemists, Stafford.

**ASSISTANT**, 25 to 30; unqualified; single; outdoors; accustomed to modern quick Cash business, with experience in practical Window-dressing, Dispensary, etc.; fair salary offered to capable man. Apply, by letter, giving usual particulars, to "Push," o/o Hayes & Co., 42 Bedford Hill, Balham, London, S.W.

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**HALL** Certificate young lady required immediately; applicant must be a reliable Dispenser, smart Saleswoman, with good experience of Counter work. Apply 2/461, Office of this Paper.

**IMMEDIATELY.**—Assistant, with unimpeachable references; outdoors; abstainer preferred; quick and obliging; good Dispenser and Counter hand; not over 30. Please state full particulars, experience, and salary required to Mr. Wilson, 80 Lamb's Conduit Street, London, W.C. 1.

**JUNIOR** or lady Assistant required; must be an experienced and reliable Dispenser and capable of giving general help; please give particulars of experience and state salary. Amon, Chemist, 436 High Road, Streatham, S.W. 16.

**LADY** Assistant wanted, unqualified, about 20 to 25, with knowledge of Dispensing, Retail Counter, and Photography; outdoors; permanency; salary £3 per week; state age and experience. Oldfield, Chemist, Station Road, Westcliff-on-Sea, Essex.

**MANAGER-ASSISTANT.**—Advertiser is wanting a young, energetic Assistant to start, single-handed, a new branch in country town; main shop few miles distant; small salary, but good interest in profits will be given; please state terms that would be agreeable; applicant must be absolutely trustworthy in all respects. Reply "Branch" (130/35), Office of this Paper.

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**REQUIRED**, for management, branches in London suburbs, qualified man, keen and businesslike; must be a thoroughly experienced Salesman, tactful with customers, and able to control staff; up-to-date Window-dresser and all-round Photographic experience; age 26 to 36; right salary to the right man. Apply ("L." 2/46), Office of this Paper.

**QUALIFIED** Assistant required immediately; accustomed to good-class Retail and Dispensing business. Please send full particulars to A. J. Phillips, 156 Cromwell Road, South Kensington, S.W. 7.



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**UNQUALIFIED** male, 20th inst.; good class business; outdoors; state age, salary, and experience by letter; applications not replied to in three days declined. Glaister, 49 Abbey Road, London, N.W. 8.

**UNQUALIFIED** Assistant, gentlemanly Junior, in high-class Retail and Dispensing business; permanency. Apply, giving references, to Arrowsmith & Horrell, Central Pharmacy, Broadstairs.

**WANTED**, unqualified Assistant for London suburbs with Dispensing experience; live Salesman and tactful with customers; knowledge of photography; smart Window-dresser. Apply 2/460, Office of this Paper.

**WANTED**, a reliable Assistant (unqualified); must be a quick and accurate Dispenser. Particulars from the Manager, 57 Lower Clapton Road, London, E. 5.

**WANTED** (early in March), Junior Assistant; outdoors; good appearance and address; state age, height, experience, salary, enclose photo, and full particulars; abstainer essential. Holt, Cash Chemist, Scunthorpe, Lincs.

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**A.**—QUALIFIED Chemist, age 31; height 5 ft. 9 in.; experienced English and French Dispensing; very good week-end Counter experience; speaks French; reliable; present situation over 10 years; disengaged end of February. Write R. Aubert, Yeats' Pharmacy, 90 Southampton Row, W.C. 1.

**A** CAPABLE Assistant, unregistered, wants situation in a live business where experience, reliability, and willingness to work will be appreciated; married; tall; active. Barrett, 10 London Road, Portsmouth.

**A** LADY Dispenser (20), Hall, requires post; experience in Dispensing and Bookkeeping. Apply Thomas, Tygwyn, Johnstown, Carmarthen.

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**DOCTOR'S** Daughter requires post as Dispenser, Doctor or Institution (Hall); many years' experience; accurate, quick, reliable; used to interviewing patients; London, W., preferred. "Medicus," 152 Kensington Park Road, Notting Hill, W.

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**QUALIFIED**; Locum or Assistant; South Wales preferred. "Delta" (126/28), Office of this Paper.

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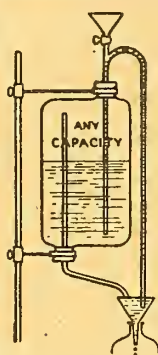
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